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ANNUAL REPORT
OF THE
DEPARTMENT OF AGRICULTURE
OF THE
PROVINCE OF ALBERTA
FOR THE YEAR
1952



PUBLISHED BY ORDER OF THE LEGISLATIVE ASSEMBLY

Edmonton
Printed by A. Shnitka, Queen's Printer for Alberta
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To His Honour,
J. J. BOWLEN,
Lieutenant-Governor of the Province of Alberta.

Sir:

I have the honour to submit herewith the Report of the Department of Agriculture for the year 1952.

I have the honour to be, Sir,

Your obedient servant,
D. A. URE,
Minister of Agriculture.

DEPARTMENT OF AGRICULTURE
1952

HON. D. A. URE, Minister of Agriculture

MR. O. S. LONGMAN, Deputy Minister of Agriculture

HEADS OF BRANCHES

A. M. Wilson, Field Crops Commissioner.
W. H. T. Mead, Live Stock Commissioner.
D. H. McCallum, Dairy Commissioner.
F. J. Higginson, Acting Poultry Commissioner.
W. G. LeMaistre, Provincial Apiarist
J. Kokolsky, Fur Farm Supervisor
F. H. Newcombe, Director, Extension Service
E. E. Ballantyne, V.S., Director, Veterinary Services
R. M. Putnam, Superintendent, Schools of Agriculture and Assistant
Deputy Minister.
N. N. Bentley, Principal, Vermilion School of Agriculture.
J. E. Birdsall, Principal, Olds School of Agriculture.
J. E. Hawker, Principal, Fairview School of Agriculture.
G. S. Black, Supervisor, Junior Activities.
P. D. Hargrave, Superintendent, Horticultural Station

REPORT OF THE DEPUTY MINISTER

(O. S. Longman)

The Honourable D. A. Ure,
Minister of Agriculture.

Sir:

I have the honour to submit herewith for your consideration the forty-sixth Annual Report of the Department of Agriculture for the year ending December 31st, 1952.

Despite certain misfortunes dealt with more specifically within the report, the year 1952 shall be recorded as one of the notable years in the agricultural history of Alberta.

Within the report will be found a detailed review of the past year's activities of the nine Branches of the Department, and in addition the report of the Surplus Wheat Board Monies Trust.

During the past few years Alberta's agriculture has been experiencing the competition and impact of industrial expansion arising from the development of oil and mineral resources. In this connection a comparison of the 1946 and 1951 Canadian census pertaining to Alberta is very illuminating, if not challenging. The census figures as quoted herewith reveal the growth trend of urban and rural population during the period in question.

<u>Year</u>	<u>Total</u>	<u>Urban</u>	<u>Rural</u>	<u>Farm</u>	<u>Non-Farm</u>
1946	803,330	354,396	448,934	335,610	113,324
%	100	44.1	55.9	41.8	14.1
1951	939,501	449,675	489,826	339,955	149,871
%	100	47.9	52.1	36.1	16.0
Increase	136,171	95,279	40,892	4,345	36,547
" in %	17.0	26.9	9.1	1.3	32.2
Division of total increase	100	70.0	30.0	3.2	26.8

It will be observed that of the 30% increase in rural population only 3.2% is recorded as being on the farms, while the balance 26.8% is rural non-farm, or residing in towns and villages.

The foregoing constitutes a challenge to all agricultural leadership.

Demands for agricultural service continues to increase. In particular the difficulties confronting young and prospective farmers to become established on farms appear to be growing. This condition would appear to indicate that in addition to the technical assistance now being given that greater study and consideration may have to be given to personal problems.

The two basic elements in agriculture are man and soil - humanity and land. It therefore appears that there is a growing challenge to agricultural leaders to design ways and means to bind or weld together the two essential elements to the mutual and perpetual advantage and preservation of each. Without this foundation technical service can only be partially utilized.

During the month of December the Department suffered an irreparable loss in the death of Mr. T. W. Whelan, the Secretary-Accountant of the Department. Mr. Whelan served the Department for twenty-two years. Mr. H. W. Gaebel, Assistant Secretary-Accountant, was appointed to succeed Mr. Whelan.

During the year the following promotions, retirements and resignations took effect:-

J. E. Birdsall - appointed Principal, School of Agriculture, Olds
J. R. Boon - Extension Fieldman - Retired
S. C. Acheson - Instructor, School of Agriculture, Vermilion - Resigned

H. L. Beckett - Dairy Inspector, Edmonton - Resigned
 E. C. Elders - Instructress, School of Agriculture, Vermilion - Resigned
 M. B. Habbirk - Instructress, School of Agriculture, Vermilion - Resigned
 Dr. Phyllis N. Hardy - Veterinary Laboratory Technician - Resigned
 R. A. Harvey - Instructor, School of Agriculture, Vermilion - Resigned
 M. M. Jorgenson - Instructress, School of Agriculture, Olds - Resigned
 Peter Maron - District Agriculturist, Lac La Biche - Resigned
 R. J. McKnight - Supervisor, Live Stock Breeding Associations - Resigned
 N. J. Mitton - Instructress, School of Agriculture, Olds - Resigned
 V. E. Molsberry - Instructor, School of Agriculture, Olds - Resigned
 J. H. Moore - District Agriculturist, Youngstown - Resigned
 T. S. Rackham - Instructor, School of Agriculture, Vermilion - Resigned
 B. M. Reed - District Home Economist, Wainwright - Resigned
 Peter Regehr - Dairy Laboratory Technician - Resigned
 H. B. Robinson - District Home Economist, Stettler - Resigned
 E. V. Shemansky - Instructress, School of Agriculture, Vermilion - Resigned
 M. O. Smart - District Home Economist, Lethbridge - Resigned
 Lillian Wasiuta - Instructress, School of Agriculture, Vermilion - Resigned
 Dr. G. K. Weir - Micropathologist, Edmonton - Resigned

At this time I wish to express my sincere appreciation to you Sir for your guidance and for the service and loyalty of the staff in the implementation of the programs and policies of the Department during the year. Particularly do we appreciate the assistance rendered during the year by officials of the Federal Department of Agriculture, the Faculty of Agriculture of the University, Municipal Councils, Service Boards, Chambers of Commerce, Advisory Committees and all others who have given freely of their time and service.

Respectfully submitted,

O. S. LONGMAN,

Deputy Minister.

LISTS OF ACTS ADMINISTERED BY
THE ALBERTA DEPARTMENT OF AGRICULTURE

Agricultural Department Act
Agricultural Pests Act
Agricultural Relief Adjustment Act
Agricultural Relief Advances Act
Agricultural Schools Act
Agricultural Service Board Act
Agricultural Societies Act
Alberta Women's Bureau Act
Bee Diseases Act
Brand Act
Bull Exchange Act
Coarse Grain Marketing Control Act
Dairymen's Act
Domestic Animals (Unorganized Territory) Act
Farm Machinery Act
Feeder Associations Guarantee Act
Frozen Food Locker Act
Horned Cattle Purchases Act
Line Fence Act
Live Stock Diseases Act
Live Stock and Live Stock Products Act
Names of Homes Act
Noxious Weeds Act
Pure Bred Sire Area Act
Seed Control Areas Act
Seed Grain Purchase Act
Stallion Enrolment Act, 1949
Soil Drifting Control Act
Stock Inspection Act
Straw Conservation Act
Vegetable Sales (Alberta) Act
Wheat Board Money Trust Act

ANNUAL REPORT

FIELD CROPS BRANCH

A. M. WILSON, Commissioner
R. L. Pharis, Crop Improvement
G. R. Sterling, Soil Conservation and Weed Control
W. Lobay, Crop Protection
P. D. McCalla, Horticulture

REPORT OF FIELD CROPS COMMISSIONER
A. M. Wilson

The year 1952 will be long remembered in crop production annals. Farmers combined thousands of acres of 1951 crop in March, April and May. The late harvest and early winter of 1951 had snowed in, an estimated 40% of the crop, however due to a dry bright spring the recovery of grain from over wintered swaths and stooks was greater than anticipated. The loss in yield was roughly estimated to be 15 to 25% and in general the quality was reduced about two grades.

Although dry weather prevailed over most of the province during seeding, surface and subsoil moisture was generally good and crops came away quickly. Rainfall during the growing season was slightly greater than normal in southern Alberta and slightly less than normal in the Peace River district.

The weather combination throughout the season produced bumper crops in most areas. Harvest weather was ideal and practically the entire crop was combined or threshed in good condition. A few farmers experienced some difficulty with tough and damp grain due to an urge on their part to avert "snowed in" crops which had been experienced two or more years in succession. Light frost was recorded on August 29th, which lowered grades to 4 and 5 in scattered districts. The first killing frost occurred during the week of October 3rd.

A very open fall with practically no snow and mild weather prevailed over most of Alberta. Much fall cultivation was completed and many farmers were able to repair buildings and fences or undertake additional farm improvements.

At the close of the year below zero temperature had occurred only on northern areas and there was practically no snow in any part of the province. Livestock grazed stubble fields and pastures up to the first week in January, 1953.

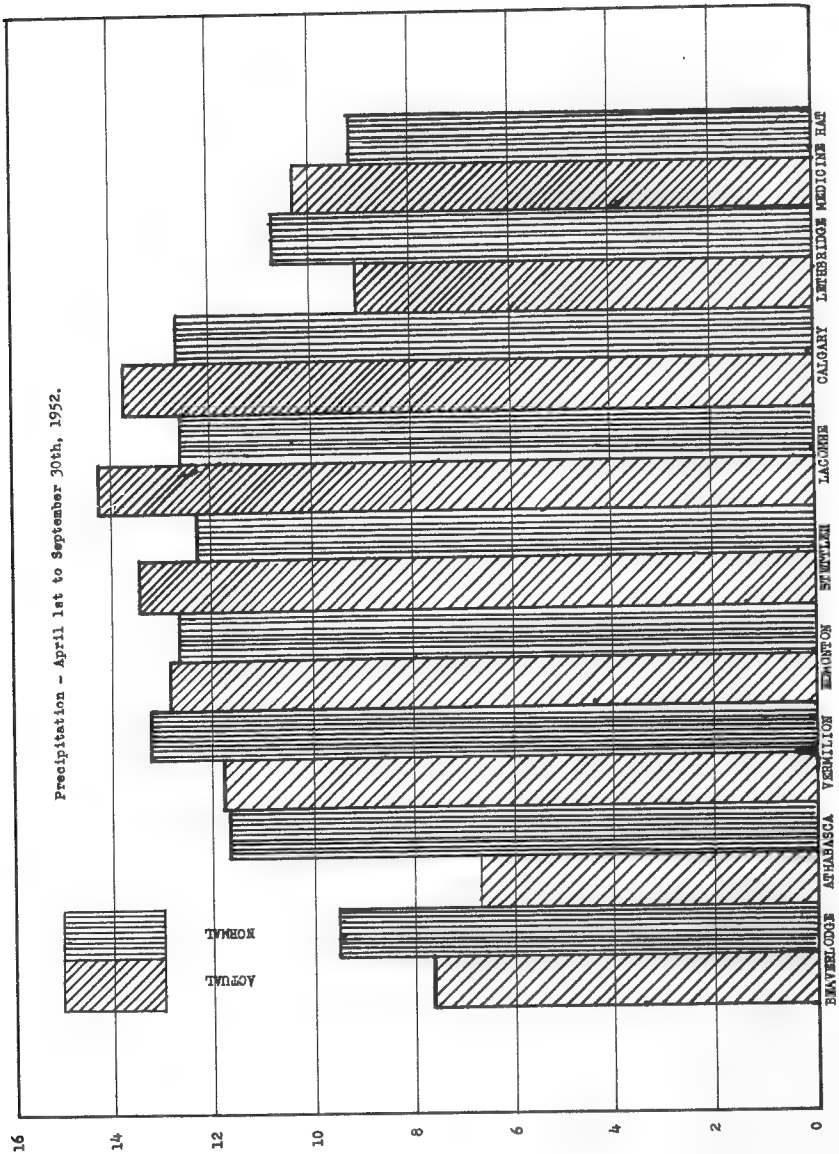
There was a slight decrease in wheat acreage, a very noticeable reduction in oats and a corresponding increase in acreage seeded to barley. The shift in production was particularly noticeable in the Peace River district. Farmers were anxious to plant earlier maturing crops to avoid late harvesting experiences of two succeeding years. Yields were of record proportions, and with ideal harvest conditions elevator storage was filled to capacity, with quotas as low as five bushels in many districts. The movement of grain to markets or to terminal storage had no opportunity of keeping pace with farm harvest operations consequently farm storage was filled to capacity and in southern Alberta much grain was piled in the field. By December 31st few elevator points had quotas up to fifteen bushels per acre and most of them had much less.

Forage seed crops were above average in yield and due to the long frost-free season legume seed production was considerably more than originally expected. Buying prices of farm alfalfa and clover seeds were much lower than in 1951. Farmers were paid less than half for their alfalfa. This condition was attributed to the large carry over and increased production in United States. Some uncleaned seed was still in farmers' hands at the close of the year due to congested cleaning and storage facilities.

Hay and pasture crops were considerably above average. Livestock feed --- supplies were never more abundant and while there appeared to be a surplus the length of the feeding season could conceivably change this picture.

Crop damage from insects, drought and hail was at a minimum. Hail losses were approximately 50% less than in 1951. Grasshoppers were negligible and the recognized drier areas of the province produced bumper crops. Apart from those less fortunate farmers most agreed that 1952 was a bumper year.

The following chart indicates the rainfall at various points during the growing season.



It will be noted that no places received excessive moisture. The high yield being attributed to subsoil moisture reserves from 1951, and the timeliness of rains during the growing season.

CROP IMPROVEMENT SERVICE

R. L. Pharis

Crop Improvement Demonstration Policy

Five crop improvement projects made up the policy, which is designed to aid District Agriculturists in demonstrating the value of better crops and better farm practice.

Project A: Forage Seed Production

This project was used to introduce forage seed production in areas where this type of enterprise might become important. A total of 64 applications was received from 15 District Agriculturists.

The following distribution was made:

	Quantity Distributed (lbs.)
Alfalfa, Grimm	970
Alfalfa, Ladak	545
Alsike	200
Creeping Red Fescue	1,248
Crested Wheat Grass	50
Brome	50
Reed Canary	80
	<u>3,143</u>

Project B: Pasture Improvement

This project was continued in the hope that farmers could be made more conscious of the need for better pastures. Follow-up reports on pastures planted on 1950 and 1951, under this project, indicated a fair amount of success.

Two hundred and twenty-three applications were received from farmers in 27 District Agriculturists' territories.

The following quantities of seed were used in filling these orders:

Pounds	Pounds
Alfalfa 5,011	Altaswede 503
Brome 8,596	Alsike 1,312
Creeping Red Fescue .. 2,866	Reed Canary..... 545
Crested Wheat Grass ... 720	Ladino Clover 10
Kentucky Blue Grass 213	Alsike Timothy Mix. 65
Red Top 401	Alfalfa-Sweet Clover Mix. 40
Sweet Clover 498	Orchard Grass 70
Timothy 738	White Dutch Clover..... 15
	Slender Wheat 20
	<u>2,580</u>
<u>19,043</u>	
Total	21,623

In addition, fertilizer was supplied to 16 applicants who had established pasture under the project in previous years. The following quantities were used.

Ammonium Phosphate (11-48)	600 lbs.
Ammonium Phosphate (16-20)	2,500 lbs.
Ammonium Sulphate	1,100 lbs.

Project C: Balanced Farming

This project was set up to encourage farmers to adopt suitable crop rotations. Assistance by providing forage seed, was given in the second year of the rotation at a discount of 25% for 1/6 of the acreage up to a maximum of 25 acres. There were 7 applications from 5 District Agriculturists' districts, 1,839 pounds of forage seed being distributed. This project was not utilized to a large extent, as it involves a far greater change in farming practice than most farmers are prepared as yet to accept.

Project D: Field Demonstrations - Crops and Fertilizers

This project was designed to demonstrate the value of different kinds and varieties of field crops, and, where advisable, the value of fertilizer on these crops. Seed and fertilizers were supplied direct to District Agriculturists without cost, quantities supplied being limited to each District Agriculturist. Sixteen District Agriculturists used the project.

The following quantities of seed and fertilizer were distributed:

	Pounds		Pounds
Alfalfa	300	Alsike	63
Brome	155	Reed Canary	10
Creeping Red Fescue ...	425	Orchard Grass	40
Crested Wheat	170	Ladino Clover	8
Sweet Clover	170	Red Top	20
Altaswede	30	White Dutch Clover	5
Birdsfoot Trefoil	6	Alsike-Timothy Mixture	30
Ladak Alfalfa	<u>100</u>		
	1,356		<u>206</u>
Total			1,562
Ammonium Phosphate (11-48)		1,750 lbs.	
Ammonium Phosphate (16-20)		1,400 lbs.	
Ammonium Sulphate		<u>600 lbs.</u>	
		3,750 lbs.	

Project E: Crop Variety Demonstration Plots

This project was used by District Agriculturists to demonstrate the varietal differences in the cereals and the growth habits of forage crops. Seed and fertilizer for 90 demonstrations were provided to 18 District Agriculturists.

Forage Crop Seed Production

1952 was a very satisfactory year for the production of forage seeds. With the exception of some losses incurred by high winds while clovers were in the swath, exceptionally fine conditions existed during the harvesting period. The following figures give the estimated seed production for the most important forage crops in the years 1949 to 1952 inclusive:

	1949	1950	1951	1952
Alfalfa	3,000,000	9,000,000	1,900,000	5,000,000
Sweet Clover	8,193,000	12,000,000	3,200,000	4,000,000
Red Clover	1,183,000	900,000	600,000	1,000,000
Alsike Clover	2,607,000	1,700,000	1,100,000	4,500,000
Timothy	66,000	No figure available	154,000	200,000
Crested Wheat	94,000	200,000	220,000	150,000
Brome	2,200,000	6,000,000	4,500,000	5,000,000
Creeping Red Fescue	846,000	400,000	1,350,000	2,000,000

Alfalfa seed production was up considerably in both Canada and the United States. Prices paid to seed growers were much lower than last year. The overall

production of other seed crops was average or below, but the market was seemingly affected by the abundance of alfalfa, and prices paid were considerably lower than last year.

The Alberta Crop Improvement Association

This Association is primarily concerned with the encouragement of the wider use of registered and certified cereal grains, thereby improving the quality of commercial grains. As in preceding years participating Elevator Companies and the Alberta Seed Growers' Co-op, handled the distribution.

Registered and certified seed, marketed in this manner in 1952, as compared with prior years was as follows:

	1949	1950	1951	1952
Wheat	32,951	38,623	24,445	39,007
Oats	34,398	47,227	46,216	47,123
Barley	14,860	14,082	18,464	14,886
Flax	329	820	2,411	4,130

The Association was directed by a committee of representatives from the following organizations: North-West Line Elevators Association; the farmer -- owned elevator companies; Plant Products Division, Canada Department of Agriculture; the Alberta Seed Growers' Co-operative; the Canadian Seed Growers' Association; Alberta Branch; the University of Alberta and the Alberta Department of Agriculture.

Production of Registered Seed

In the following table, a summary is given of estimated yields of cereals and flax, inspected for registration and certification.

	Estimated Yield (Bushels)			
	1949	1950	1951	1952
Wheat	1,416,000	375,000	1,000,000	1,270,000
Oats	1,013,000	414,000	1,775,000	1,200,000
Barley	283,000	153,000	620,000	570,000
Flax	13,000	14,000	113,000	115,000

These figures indicate that production of registered and certified seed was far above the distribution of sacked and sealed seed. Some of this seed was sold in bulk in farm to farm transactions. No doubt a large quantity was marketed commercially or fed on the farm.

The table below is a summary of acreage of grasses and legume crops inspected for registration over a four year period:

	Registered Acres				Certified Acres			
	1949	1950	1951	1952	1949	1950	1951	1952
Alfalfa	9,640	9,351	7,256	6,209	502	651	659	718
Brome	175	294	89	20	6,234	15,976	21,775	23,242
Creeping Red								
Fescue	86	79	53	484	5,249	3,136	6,477	9,127
Crested Wheat	20	76	36	23	115	158	278	155
Red Clover	251	356	215	122	288	57	157	245
Sweet Clover	55	12	392	---	92	720	954	951

The Alberta Varietal Zonation Committee

This is an advisory committee to the Provincial Seed Board, Its purpose is to co-ordinate the findings of the various experimental agencies in the province with respect to grain varieties, and to recommend those best suited to the various soil climatic zones. The committee is composed of representatives from the following; Departments of Plant Science and Soils, University of Alberta; Canada Experimental Farms, Science and Production Services, and the Provincial Field Crops Branch. The annual meeting of the Committee was held in December, with the following new varieties being recommended:

Chinook, a sawfly resistant, hard red spring wheat, was recommended in Zone 1.

Exeter oats was recommended in Zone 2A.

Velvon 11 barley was recommended in Zone 2B.

Other changes were the recommendation of Vantage barley for all of Zone 3; Montcalm was removed from the list of recommended varieties in Zone 3B, and Newal was added; Beaver oats replaced Larain in Zone 4A.

The complete list of recommended varieties for 1953 is as follows:

Wheat:

Hard Red Spring - Chinook, Rescue, Saunders and Thatcher.

Hard Red Winter - Kharkov and Yogo.

Soft White Spring - Lemhi.

Oats - Ajax, Beaver, Eagle, Exeter, Larain and Victory.

Barley - Compana, Harlan, Montcalm, Newal, Olli, Titan,

Vantage 11 and Velvon 11.

Flax - Dakota, Redwing and Royal.

Rye - Dakold and Prolific.

The recommendations of the Committee were prepared for printing in leaflet form, and distributed by the Field Crops Branch throughout the province.

Forage Crops Advisory Committee

A forage crops advisory committee was organized at a meeting held at the University of Alberta in December, 1951. The Committee serves to co-ordinate results of forage crops research and experimental work in the province. Membership of the committee consists of representatives from the Departments of Plant Science and Soils, University of Alberta; each of the Canada Experimental Farms in the province; the Canada Plant Products Division; the Field Crops Branch, Alberta Department of Agriculture; the Alberta Seed Growers' Co-operative and the Seed Trade. The circular, "Hay and Pasture Crops for Alberta", was revised under this committee, and released in June, 1952. Circular 79, "Grass and Legume Crops in Alberta", is to be revised and released as early as possible in 1953.

Potato Production

It is estimated that 16,700 acres were planted to potatoes in 1952. This is about 1,000 acres less than was planted in 1951.

Seed Potato Production

The following is a 4 year summary relative to seed potato production:

	1949	1950	1951	1952
No. of Growers	99	156	114	81
No. of Fields Inspected	182	293	212	177
Acres Inspected for Certification	1,005	1,684	975	702
No. of Fields Receiving Certification	148	247	183	163
Acres Passed for Certification				578

Tuber Indexing of Foundation Seed

The service of indexing foundation and seed potatoes was continued jointly by the Field Crops Branch, the Department of Plant Science, University of Alberta and the Canada Seed Potato Certification Service. Six hundred and eighty-five tubers were grown in the winter in the greenhouses and disease readings were made on them by a competent pathologist. Of the tubers tested, five hundred, or 73%, qualified as suitable for production of foundation stock.

Assistance to Settlers on Land Clearing and Breaking Projects

Veteran settlers on new land in the Peace River area were assisted under the Crop Improvement Demonstration Policy to the greatest extent possible. This was done in order that a clean-seed consciousness and an appreciation of the value of forage crops would develop in these new areas in order to avoid difficulties arising from weed infestations and reduced soil fertility. Under the Agricultural Relief Advances Act, the following quantities of seed grain were supplied to necessitous settlers in this area.

Wheat	769 bushels
Oats	1,054 bushels
Barley	1,733 bushels
Flax	133 bushels

International Seed Shows

Since the value of international shows as show windows for farm products is recognized, the Department has for many years given assistance to exhibitors in the seed classes at the Royal Agricultural Winter Fair, Toronto, and the International Grain and Hay Show, Chicago. Exhibits were assembled and shipped to the shows by the Field Crops Branch, with shipping costs both ways being paid by the Branch. In addition, supervision of the exhibits at the shows was given by a representative of the Branch, and in 1952, special premiums were paid as follows: All prize monies were duplicated in connection with the International and were increased by 50% in connection with the Royal. A special honorarium of \$25.00 for each first prize in the classes for hard red spring wheat, white oats, 6-rowed barley, rye, flax, alfalfa, alsike, red clover, sweet clover, brome, creeping red fescue and russet (Netted Gem) seed potatoes was paid in connection with the Royal. A similar honorarium was paid for the same classes at the International, with the addition of timothy and crested wheat grass and the deletion of the potato class. Such honoraria were increased to \$100.00 for championships won with hard red spring wheat, white oats, 6-rowed barley and rye at both shows.

Winners of first prizes and championships were as follows:

Royal Agricultural Winter Fair

Championships:

Wheat	Ronald R. Leonhardt, Drumheller	Marquis.
Oats	Matt B. Schnurer, Sangudo	Victory.
Beans	Peter H. Friesen, Coaldale	Burbank.
Small Seeded Legumes	Gordon S. Moyer, Sr., Elmworth	Alsike.

Reserve Championships:

Wheat	R. R. Sharp, Munson	Marquis.
Rye	T. Brown & Sons, Cassils	Prolific.
Flax	Gus Regehr & Robt. V. Hall, Brooks	Redwood.

First Prizes:

Potatoes (Netted or Russet)	Tom H. Ohama, Rainier.
Oats, White, Early	Helen Sveinunggaard, Belloy.
Oats, Medium, Early	Roy Warren, Hylo.
Barley, 6-rowed	Norman Bieber, Rimbey.
Hard Red Spring Wheat	Ted M. Allen Jr., Taber.
White Spring Wheat	T. Brown & Sons, Cassils.
Beans, Canning	T. Brown & Sons, Cassils.
Sweet Clover	F. H. White, Spirit River.
Brome Grass	R. Goodall, Coronation.

In addition, 14 seconds and 89 other awards were won by Alberta exhibitors.

International Grain and Hay Show

Championships:

Barley	Geo. S. Snow, Milk River	Compana.
Oats	Matt. B. Schnurer, Sangudo	Victory.

First Prizes:

Soft White Spring Wheat	Jas. Allen, Grantham.
Alsike Clover	T. Corlett, Clairmont.
Sweet Clover	F. H. White, Spirit River.
Barley 6-rowed	T. Brown, Cassils.
Rye	Jas. Allen, Grantham.

In addition, 7 second place awards, 6 third place awards, and 25 other awards were won by Alberta exhibitors.

Seed Drill Surveys

Seed drill surveys were conducted in several Municipal Districts in 1949, 1950, 1951 and 1952, to determine the purity and quality of seed being sown. - Seed samples were taken by Field Supervisors, Weed Inspectors and District Agriculturists, direct from farmers' seed drills at seeding time. The following is a summary of seed grades obtained on the samples taken:

Year	No. of Districts	No. of Samples	No.1 Seed	No.2 Seed	No.3 Seed	Rejected
1949	23	1,939	21 1/2%	10%	17 1/2%	51%
1950	12	835	32%	9%	19%	40%
1951	9	630	26%	17%	17 1/2%	39 1/2%
1952	10	702	28.3%	15.4%	15.1%	41.2%

Information from 3 districts, covering 151 samples showed that 50.7% were untreated, or treated with formalin, which is not a recommended fungicide.

Four years' results from seed drill surveys indicate that half the farmers are still prepared to plant weed infested seed grain.

With time and opportunity to clean and treat seed properly it is a calamity that such an important part of farming continues to be neglected.

CROP PROTECTION SERVICE

William Lobay

The spring of 1952 started early with a fine, dry month of April, but after June, precipitation was above normal particularly in the southern part of the province. This higher precipitation was effective in reducing the grasshopper and other insect population in southern Alberta.

Crop Insects

Grasshoppers

The grasshoppers infestation which had reached its peak in 1950 in Alberta had declined very significantly by 1952, excepting the Peace River area (see accompanying maps.)





Unfavorable weather for grasshopper development coupled with extensive control measures carried out since the outbreak occurred (1947-1950) were two important factors for the decline of this pest in south and south-eastern Alberta. The following table shows the district, the degree of infestation, and the acreage affected in southern Alberta.

District	Acreage Affected	Degree of Infestation
Provost - Bodo area	100,000	Normal - Light
Coronation - Spondin - Naco region	600,000	Normal - Light
Centering around Craigmyle	300,000	Normal - Light
Acme - Strathmore - Drumheller - Equity region	750,000	Normal - Light
Wintering Hills - Hussar area	600,000	Light
Stavely - Granum - Barons area	250,000	Light
Armada - Lomond - Barons region	180,000	Light

Localized outbreaks in the Peace River country reached wider proportions than in 1951 due primarily to a drier spring. The areas where such outbreaks occurred were centered around (1) Falher and south to little Smoky River. (2) Tangent - Eaglesham - Codesa area. (3) Peoria - Bad Heart area. (4) Judah - Nampa area. (5) A small area north-west of Peace River. (6) Deadwood - North Star region. (7) Notekiwin - Hotchkiss. (8) Keg River district. (9) Worsley district. (10) Cherry Point area. Infestations were mainly confined to alfalfa and other legume and forage crop fields, but there were also some infestations in cereal crops causing marginal damage to grain.

The three economic species of grasshoppers (*Camnula pellucida*, *Melanoplus Mexicanus*, *Melanoplus bivittatus*) were present, in varying proportions, in all southern and northern infested regions. Timely attention in all areas resulted in practically negligible crop losses.

Under the provincial grasshopper policy, various poisons were made available as follows:

- (1) Sawdust, mill feeds and insecticides for bait were placed strategically at 22 points designated by Municipalities, Improvement Districts and Special Areas. In addition 7 points were located in the Peace River region as supply depots for insecticides.
- (2) Aldrin, as well as a limited quantity of Chlordane and Aldrin dust was available to farmers at cost.

Sawdust-flour baits were prepared at each station and supplied free to the farmer. Sprays and dusts were obtained through the local municipal authorities. The chemical, Aldrin, was used as the basic insecticide in the preparation of both baits and sprays. Due to the low cost of Aldrin spray (35¢ per acre) and the ease of application with conventional weed sprayers, farmers used very little bait and resorted almost entirely to Aldrin spray.

No purchases of Aldrin were necessary because the 10,335 lbs. technical Aldrin (4,134 gallons of emulsified material) on hand from 1951 was considered sufficient in view of the predicted light forecast.

Further tests were conducted with a new insecticide Dieldrin (Compound 497) which gave excellent control at a rate of 1 oz. active Dieldrin per acre, used as a spray.

The following table shows the extent of the 1952 grasshopper campaign. Similar information is shown for the preceding five years for comparison purposes:

	1947	1948	1949	1950	1951	1952
Acres of land in infested area	2,500,000	8,750,000	11,000,000	10,000,000	10,000,000	3,000,000
Acres of cropland menaced	32,000	195,000	800,000	700,000	400,000	30,000

No. stations operated	11	17	75	76	60	30
Bus. poisoned bait spread	9,100	56,700	191,000	184,000	103,062	631
No. farms receiving bait	107	851	2,780	2,336	1,072	12
Estimated acres crop destroyed	1,000	2,000	2,500	2,000	900	700
Estimated lb. technical Chlordane used under policy	---	800	67,000	23,560	2,500	350
Acres sprayed with Chlordane	---	1,100	52,000	6,550	1,500	550
Estimated lb. technical Aldrin used under policy	---	---	---	13,000	10,000	800
Acres sprayed with Aldrin	---	---	----	100,000	62,500	6,500
No. lb. 10% Chlordane Dust used under policy	---	---	15,000	5,000	---	100
No. lb. 2 1/2% Aldrin Dust used under Policy	---	---	---	25,000	22,000	150

There were 5 meetings held in the heavier infested areas where various cultural and chemical control methods were discussed.

The following information relating to grasshopper control was issued to all District Agriculturists, Field Supervisors, and station operators:

- (1) Grasshopper forecast maps for 1952. (This was also mailed out to all elevators and Post Offices).
- (2) Revised Bulletin No. 85, "Baits, Sprays and Dusts for Grasshopper Control".
- (3) Revised Charts on "Application of Aldrin Sprays and Dusts".
- (4) Chart re "Precautions on the Use of Aldrin for Grasshopper Control".
- (5) Special Instructions to Station Operators on "The Preparation and Distribution of Baits".
- (6) Various forms used in connection with the Sale and Distribution of Sprays and Dusts.

Fieldmen stationed at Lethbridge, Medicine Hat, Youngstown, and Fairview ably assisted in the grasshopper campaign.

Wheat Stem Sawfly

Significant wheat stem sawfly infestation was again noted in the Nobleford

Carmangay region and in the Warner area with a few fields showing up to 40% - 50% damage. Somewhat lesser activity was noted in the Champion and Lomond districts. Light and spotty infestations occurred throughout the wheat growing regions in the brown and the dark brown soil zone areas of southern Alberta.

Information with regard to the control of this pest has been made available to farmers through many channels. The acreage seeded to Rescue wheat (resistant due to the solidness of stem) has increased considerably. Hence the over all losses of grain due to sawfly damage were not great. The table below shows the estimated crop losses in Crop Districts 1 to 7 inclusive in 1952 and the preceding six-year period.

Loss of Grain in Bushels

Crop District	1946	1947	1948	1949	1950	1951	1952
1	1,050,000	1,289,000	1,021,000	404,000	516,000	858,000	150,000
2	144,500	143,880	39,700	29,000	33,000	Negligible	325,000
3	180,000	197,500	205,500	197,000	167,000	111,600	40,000
4	1,680,000	1,586,250	1,018,500	897,000	1,091,000	410,640	945,000
5	10,000	56,400	113,200	82,000	89,700	79,110	30,000
6	100,000	150,000	197,700	162,000	178,000	Negligible	Negligible
7	5,000	Negligible	Negligible	Negligible	108,000	308,390	160,000

Cutworms:

1. Pale Western Cutworm

Damage to grain by this pest was somewhat lighter than last year. Infestations were reported from the areas around Enchant, Bow Island, Schuler, Medicine Hat, and a few points around Foremost, ranging from very light to moderate. The crops damaged were wheat and flax.

Prior to 1950, cultural control was the only effective method known to cope with the problem. Since that time Entomologists of the Department of Agriculture have developed satisfactory chemical control methods. In tests performed the insecticides were applied to the soil surface by a low-pressure, low-volume sprayer delivering 4 gallons of water emulsion per acre. Chlordane, Dieldrin and Toxaphene proved most effective. Prompt spraying when cropthinning appeared gave adequate control. Rates of insecticides used were: Chlordane, 1 1/2 lb. (technical) per acre, Toxaphene, 2 lb. (technical) per acre.

2. Red-Backed Cutworm

The red-backed cutworm, usually found in more moist areas, such as the park belt and the foothills caused slight damage in a few districts around Edmonton, Lacombe, Newbrook and St. Paul.

Many requests however, particularly from gardeners were received for information on control methods.

The most effective bait for immediate control of this pest was a moistened bran and Aldrin or Chlordane bait prepared as follows:

Bran 25 lb.
Chlordane emulsion 2/5 pt.
(containing 10 lb. technical per gal.)

Or

Aldrin 2/5 pt.
(containing 2 1/2 lb. technical per gal.)
Water 2 1/2 gal.

This quantity should cover 1 to 2 acres.

A mimeographed bulletin was prepared on the control of the cutworm and distributed to the District Agriculturists as well as to others who requested this information. Over 300 sheets were distributed.

Wireworms

The wireworm was the most destructive insect pest of the cereal crops and potatoes. Infestations ranging from moderate to severe occurred again in the same areas as last year, namely: (1) Grande Prairie district. (2) Fairview - Peace River. (3) Camrose east. (4) Calgary - Strathmore. (5) Area east of Hanna. (6) Lethbridge district. (7) Wagner - Coutts region. Light to moderate infestations outskirted the above regions.

In many southern areas a number of fields showed 25% losses by the beginning of June. In these same areas some damage to winter wheat was observed in the fall.

Benzene hexachloride (BHC), a very effective insecticide for controlling wireworms, was recommended for use by farmers residing in infested areas. The cost of this chemical has now been reduced from \$3.00 per acre in 1949 to \$1.00 per acre in 1952. At meetings and Short Courses held during the year farmers have expressed much satisfaction in practically eliminating wireworms by using BHC treated seed.

A large quantity of BHC was purchased by farmers in 1952. One firm which sold 64 lbs. of this insecticide in 1949 reported that nearly 30,000 lbs. were sold in 1952. Other firms reported similar trends.

Field trials were set out again in the infested areas to demonstrate the usefulness and value of this insecticide. Five hundred mimeographed sheets were prepared and mailed to all District Agriculturists and Field Supervisors respecting control methods. One issue of the Crop Protection Bulletin dealt entirely with this subject.

Sweet Clover Weevil

The sweet clover weevil spread over a more extensive area than in 1951. - It was located in practically all the sweet clover fields except in the Peace River country.

The table below shows the results of a survey conducted in the last four years to determine the spread of this pest:

	1949	1950	1951	1952
Acres sweet clover examined	118,640	121,500	118,000	134,600
Acres on which weevil were found	13,475	20,500	15,000	38,500
Acre light infestation	5,935	7,800	8,000	32,500
Acreage severe infestation	7,540	12,700	7,000	6,000

It is noted that although the infested area increased, the over-all severity of the infestation decreased.

The excess moisture in 1951 germinated and developed an excellent crop of sweet clover so that in many fields where every plant was attacked, no plant was killed or severely set back by the notching.

A number of trials were repeated this year in perfecting the use of insecticides. Demonstrations were set out at Legal, Ponoka and in the Willingdon - Shandro area. DDT, Aldrin and Dieldrin at recommended rates gave good results.

Information on control methods was published and distributed through this office.

Lygus Bug

Alfalfa seed fields in most of the areas in southern Alberta were relatively free of Lygus bugs, averaging not more than one per sweep up to the flowering stage. There were however, a few isolated exceptions where between 10 to 20 bugs per sweep were found.

Apparent damage was done to alfalfa crops at blossoming time in the Grande Prairie, Peace River and Deadwood areas where up to 25% of the blossom was destroyed in many fields. Five to ten bugs per sweep were common in these areas.

Early spraying with Aldrin for grasshopper control appeared to give good control for Lygus as well. A rate of 2 1/2 oz. of active Aldrin was recommended. Supplies of Aldrin were made available by this Branch as requested. A circular

was prepared for distribution to all farmers using this insecticide, on the need for timely and controlled spraying to affect minimum destruction of cutter bees, on alfalfa seed stands.

English Grain Aphid:

This insect did not present any economic problems as it did in 1950 and 1951. Only minor infestations appeared for a short length of time in southern Alberta. Also light infestations occurred on grain in the Falher - Mclellan-district of northern Alberta.

An insecticide commercially known as Metacide (containing Parathion as the active ingredient) was available for use by farmers, in case of emergency. The cost of this spray has now been reduced to less than \$1.00 per acre.

Rusty Grain Beetle

This stored grain insect pest appeared in elevators in November and December, at the following points: Turin, Glenwood, Brocket, Wilson, Champion, Chipman and Wostok.

The beetle was also found causing damage to grain in farm storage in a number of points in southern Alberta. The development of this insect to economic proportions had not appeared in Alberta for many years. Though most of the grain was stored in dry condition in 1952, unusually high temperatures prevailing during September to December were instrumental in the development and activity of this pest.

A meeting was held in Calgary where Dominion Government entomologists and Provincial authorities met representatives of the Grain Trade with respect to steps to be taken in controlling the outbreak of this pest. Following this conference an information circular was prepared by this office and mailed to all District Agriculturists. News flashes over all radio stations in Edmonton and Lethbridge were broadcast suggesting control measures to be undertaken to save infested stored grain.

Other Insects:

Sugar Beet Root Aphid infestation was significantly below normal this year resulting in negligible damage to sugar beets. Reports indicated there was considerable control by predators.

Red Turnip Beetle was common in the Edmonton area, slightly damaging cruciferous plants in gardens. Some reports were also received of this insect being active in the Nobleford area.

Spruce Gall Aphid infestation was more severe than in 1951. Tip damage was evident in many spruce windbreaks and farmstead plantings.

Spruce Sawfly (Yellow-Headed) caused up to 75% defoliation of Colorado Blue Spruce in the Hayter - Provost area. Heavy defoliation also appeared in the Beaverlodge region.

CROP DISEASES

Diseases of Cereal Crops:

Stem Rust was reported throughout the eastern part of southern Alberta but it caused no serious damage except in a few late stands of Lemhi wheat. This disease was practically absent in central and northern Alberta.

Root-rots were much more prevalent than in 1951.

The covered and loose smuts of wheat, oats and barley caused about the usual amount of damage. An abnormally high incidence of bunt was reported from some areas in the Hanna district.

Streak mosaic, a new virus disease of wheat was found in certain areas in southern Alberta. Severe damage occurred in several fields of winter wheat in the Cardston and Pincher Creek districts. The disease was also found in many fields of spring wheat in the areas where winter wheat was grown. Reports from the Science Service Plant Pathologist at Lethbridge indicated the presence of

Streak Mosaic in many of the winter wheat fields seeded in August or early September, 1952. Infection of these fields was originated from volunteer wheat plants growing on summerfallow and stubble fields.

Diseases of Legumes

Infection of alfalfa with bacterial wilt was 65.3%, 25.0%, 8.3% and 1.7% in stands seeded in 1948, 1949, 1950 and 1951. This survey was made in fields in the Irrigation Districts of southern Alberta.

Stem nematode located at Lethbridge in 1950 caused very minor damage.

Diseases of Potatoes

1. General

The most common disease of potatoes in the province was Black-leg. Heavy precipitation during the growing season intensified this disease. Leaf-roll was also fairly prevalent in many commercial fields. Late blight was found for the first time in southern Alberta in the Rainier district. The disease appeared late in the fall and did not cause any appreciable damage. A circular was prepared and mailed to all growers in that district outlining harvesting methods to prevent tuber infection.

Some late blight was also found in the Edmonton gardens, but no damage resulted.

2. Bacterial Ringrot Survey in Alberta

The early disposal of diseased stocks gave the growers ample time to clean up their premises before new seed stocks for 1952 were brought to their farms.

Due to the early frosts, a significant acreage of potatoes was unharvested in 1951. Anticipating that the seed supply would be critical the Field Crops Branch distributed 88,000 lbs. of Foundation A Netted Gem stocks to farmers who had to dispose of ringrot infected seed.

Ringrot inspection started on August 28th with 15 Inspectors in the service. A training school was held at Edmonton and Lethbridge to acquaint the Inspectors with the disease and to outline methods to be followed. The work was completed by the middle of September. Weather conditions were ideal during the inspections. Potato crops matured earlier in 1952 than in 1951 with the result that symptoms were readily recognizable by August 15th.

There were 601 potato fields (6,286 acres) inspected in the pest control areas. This total is 170 (1,187 acres) less than 1951. The following table shows the farms and acreage of infected potatoes, and comparison with 1949, 1950 and 1951.

Results of the 1952 Ring Rot Survey by Pest Areas

Pest Area	Year	No. Farms		Acreage		%Diseased	
		Inspected	Diseased	Inspected	Diseased	of total Farms	of total Acreage
Lethbridge*	1949	513	78	4,327	747	15.2	17.2
	1950	555	80	6,950	1,515	14.4	21.8
	1951	313	31	4,000	220	9.9	5.5
	1952	282	59	3,284	759	20.6	23.1
Calgary**	1949	104	8	320	18	7.7	5.6
	1950	150	9	376	55	6.0	14.6
	1951	111	4	235	15	3.6	6.4
	1952	64	0	144	0	0	0
Brooks	1949	155	12	1,855	262	7.7	14.1
	1950	179	11	2,272	196	6.1	8.6
	1951	92	2	1,230	24	2.2	1.9
	1952	69	2	1,055	5	0.03	0.5
Edmonton	1949	220	20	2,152	151	7.0	7.0
	1950	245	30	2,526	320	12.6	12.6
	1951	255	22	2,008	219	8.6	10.9
	1952	187	14	1,802	56	7.6	3.1
Total	1949	1,052	118	8,654	1,178	11.2	13.6
	1950	1,229	130	12,124	2,086	10.5	17.2
	1951	771	59	7,473	478	7.7	6.4
	1952	601	75	6,286	819	12.5	13.0

* includes Hillspring, Taber, Vauxhall and Medicine Hat area.

** includes the Drumheller and Strathmore area.

With the exception of the Lethbridge area, the incidence of Ringrot was considerably reduced. When Lethbridge was included in the totals however, the percentage of inspected farms found diseased in all areas increased from 7.7% in 1951 to 12.5% in 1952.

From the above table, it will be noted that 20.6% (59 farms) of the 282 farms inspected in the Lethbridge area showed evidence of Ringrot. The following reasons may be advanced for the unsatisfactory condition of the Lethbridge area.

1. Local commercial seed was not available resulting in growers obtaining supplies outside the province where no restrictions are imposed on ringrot infected stocks.

2. Because of the unusually attractive prices for all grades of potatoes in the spring of 1952 (5¢ and 6¢ per lb. f.o.b. growers' cellars), the better stocks were sold and in some cases culls were used for seed.

3. The 1951 survey of potatoes was made under very difficult conditions, resulting perhaps in some slightly infested fields being missed.

4. Many growers used old potato sacks quite freely, disregarding the possibility of introducing the Ringrot onto their premises.

5. It is felt that the 1952 survey was one of the most satisfactory ever completed. Careful disposition of diseased stock this fall and winter should bring the situation at least to the 1951 level or better.

It is most encouraging to note that the Calgary area is apparently free of ringrot. The incidence has been slowly decreasing over the last ten years.

The situation has greatly improved at Brooks. Only two farms were found diseased involving a total of five acres.

The incidence of ringrot in the Edmonton area has decreased steadily since 1950. It will be noted from the chart that only fourteen farms have ringrot compared with twenty-two farms in 1951 and thirty in 1950. Also only fifty-six acres were diseased compared with two hundred and nineteen in 1951 and three hundred and twenty in 1950. In the Edmonton district there appear to be more and more growers who are establishing themselves permanently in potato production.

Under the Agricultural Pests Act, regulations allow for a check of all potatoes imported into the province. Random checking was carried out on such imported stocks which came through regular channels. There was however, a considerable movement of potatoes through various irregular channels which made enforcement difficult.

LIVESTOCK PESTS :

Cattle Grubs (Warble Flies)

The number of cattle treated for warble flies increased over 1951, as shown by the following table:

	1948	1949	1950	1951	1952
No. Cattle treated for warble fly control.	800,000	400,000	300,000	300,000	375,000

This increase may be attributable to the fact that a stronger campaign was launched in the spring than in the previous year. In addition, Municipal Pest Control Officers for the second year now were able to enforce the Agricultural Pests Act relative to warble fly control, in their respective municipalities. A number of officers organized effective campaigns and were prepared to use compulsion where necessary.

A survey has indicated that 1% of all cattle were sprayed in districts like Falher, Berwyn and Smoky Lake, up to 80 and 90% in Lethbridge, Brooks and Claresholm. Cattle ranchers in the south have recognized the need for warble fly control, and are treating every spring. All cattle entering Community Pasture Projects must be treated.

A number of demonstrations were conducted again in the area north-east of Edmonton to encourage treating. The trials which were set out in M. D. of

Strathcona in 1949 were continued. Information obtained was used for publicity in all areas.

RODENT CONTROL

Pocket Gophers

There was an increase in the pocket gopher population in 1952, especially in the black soil zone. Baits containing strychnine alkaloid were again set out, - and excellent control was obtained. Over 100 circulars were sent out to farmers and gardeners on methods of controlling this rodent.

Norway Rats:

Since July, 1950, when rats first invaded Alberta from the East, they have moved westward through Ranges 1 and 2, west of the 4th Meridian, between Townships 15 to 43 inclusive. By the end of the year there were three new spearheads in this area, reaching westward to Ranges 5 and 6. These spearheads were in the (1) Bodo-Altario area. (2) Alsask-Acadia Valley region, and (3) Schuler-Hilda area.

In coping with the problem, the Department of Agriculture employed the services of N. L. Poulin Limited, Rat Exterminators, Winnipeg, with the object of exterminating rats in the infested area and halting the movement westward. The Company started operations on June 9th, and work is still in progress. Over 5,000 buildings on 1,000 farmsteads have been "poison-proofed" in the infested area. By "poison-proofing" it is implied that the special rat contact powder is placed under buildings, and other rat harborages. The actual active ingredient in this powder is arsenic. Slightly over 60,000 lbs. of rat contact powder were used. A provincial Pest Control Officer was employed to aid and supervise this undertaking.

There were six new Pest Control Officers appointed by municipalities, towns and villages, making a total of 188 officers to date. Six provincial Pest Officers, stationed at Edmonton, Vermilion, Fairview, Lethbridge, Medicine Hat and Youngstown contacted as many of these officers as possible and aided them in organizing their campaigns.

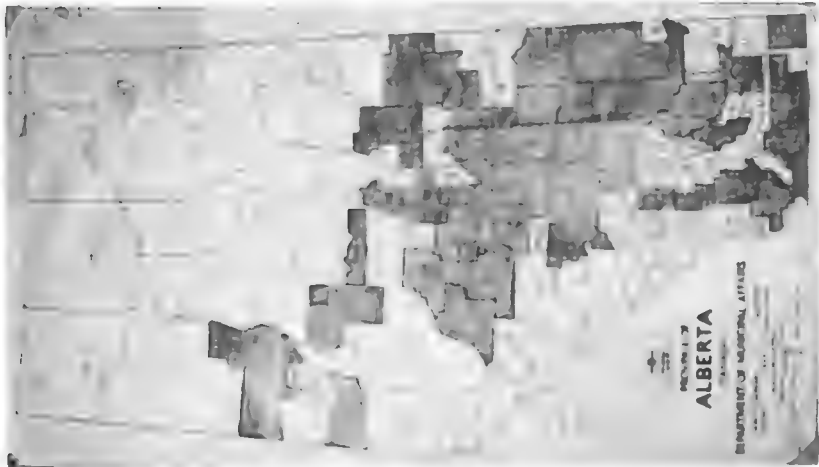
There were forty-five rat specimens preserved in plastic containers, placed in District Agriculturists' offices as well as in the Schools of Agriculture. These were used by extension personnel to familiarize people with the appearance of rats. Over 5,000 new large rat posters were printed and distributed to all schools, elevators and railway stations for posting in conspicuous places. The booklet "Rat Control in Alberta" was revised, and is available for distribution.

While the rat contact powder has been used in the exterminating project, use of Warfarin, has also been continued. Under the policy, 130 pounds of Warfarin was purchased and 75 pounds distributed to District Agriculturists who in turn provided this poison to Pest Officers for use in rat suspected areas.

COYOTE CONTROL

Under the Coyote Control Policy both cyanide guns and sodium fluoroacetate (Compound 1080) poisons were used.

An additional 13 Municipalities and 12 Improvement Districts applied for the use of "coyote getters" (cyanide guns) making a total of 60 districts (see map) where "getters" are presently used. Twenty-six schools were attended by approximately 500 persons. Instruction was given in the proper use and safe handling of the "getters".



Left: The shaded areas show where "coyote getters" were being used in 1952.

Centre: Horses are used for preparation of 1080 baits.

Right: Carcasses are poisoned with 1080 by special pump minutes after a horse is killed.

There were 4,800 cyanide guns and 12,500 shells distributed to qualified persons, making a total of 11,000 guns and 25,000 shells in use. Guns, scent, posters, etc. were supplied Pest Officers in approved areas.

Adequate control of coyotes was obtained by farmers and ranchers, particularly in central and northern Alberta, wherever the "getters" were carefully and regularly set. Some areas reported over 100 coyotes killed per month during the fall months. A few municipalities continued to pay bounties (usually \$2.50 per head) rather than request the application of the policy in their districts.

The 1080 baits which were used in the Municipal District, of, Cochrane, Pincher Creek and Sugar City were effective in eliminating coyotes. However many difficulties were encountered in setting them out and collecting them again in early spring. Some concern was expressed by Waterton Lake Park officials—that too many coyotes were being killed, and as a result increased rodent populations must be expected.

The use of 1080 was again restricted to sparsely settled areas. The following districts were approved for the use of 1080 baits.

District	No. stations set out
Pincher Creek M. D. # 9	27
Cochrane M. D. # 6	22
Sugar City M. D. # 5	21
Burlington M. D. # 2	10
L. I. D. # 1	18
L. I. D. # 11	2
L. I. D. # 22	23
Army Experimental Range	10

In addition a few 1080 stations were set in Special Areas 2, 3 and 4 on a demonstration basis. Also nine stations each were placed in the County of Grande Prairie # 1, and the M. D. of Bonnyville as trials to obtain more information and experience on the possibility of its use in wooded areas.

MISCELLANEOUS

In co-operation with the District Agriculturists and some Field Supervisors, twelve fungicide and insecticide trials were set out for demonstration purposes. Due to some hail damage only eight of these were harvested and results recorded for extension purposes.

A Crop Protection Display in co-operation with the Canada Plant Protection Service was set up at Short Courses at Calgary, Lethbridge and Brooks. Potato diseases, grasshopper control and warble fly control were illustrated.

One hundred and seventy-nine insect, disease and rodent specimens were submitted to this office for identification.

There were twelve Crop Protection Service Bulletins issued to all District Agriculturists and Field Supervisors, featuring timely topics.

Eight Short Courses were addressed and eighteen other meetings (not including coyote schools) were held on topics relative to Crop Protection and Pest Control Service. A potato field day was organized in August in the Edmonton area, with some sixty growers attending. Eight radio interviews were made, and eight short bulletins were prepared for announcement on farm programs. There were also twenty articles submitted to "Agricultural Notes".

Acknowledgment:

Sincere appreciation and grateful acknowledgment is hereby made to the Entomologists and Pathologists of the Canada Department of Agriculture, and the University of Alberta, for providing this Branch with the results of various surveys and for their assistance and information in planning and conducting programs for the control of plant diseases and insect pests.

Appreciation is also acknowledged to the Department of Zoology, University of Alberta, for the assistance provided in identifying various rodents and other specimens submitted.

SOIL CONSERVATION AND WEED CONTROL

G. R. Sterling

Weeds

Much of the 1951 crop was harvested in the spring of '52. Consequently, 1951 fall cultivation and 1952 spring operations for annual weed control purposes were hindered. However, the good growing conditions produced heavy crop growth which smothered the annual weeds and compensated for the lack of cultivation.

Chemical Weed Control

Surveys conducted indicate that Alberta farmers treated 3,259,000 acres with 2,4-D for weed control during 1952. Figures for 1951 and 1950 are 2,317,000 acres and 290,400 acres, respectively. 83.2% of the acres treated during 1952 were sprayed, the balance being dusted. Approximately 1.2% were treated by aircraft. The acreage treated would have been larger had good weather prevailed during the spraying season. Many fields were so wet that ground equipment could not be used. Considerable crop damage occurred in the Lethbridge, Calgary, Dalemead and Drumheller areas from the application of 2,4-D by aircraft. Ground applicators did not cause damage in the same areas. The Branch investigated the damage but was unable to say definitely the real reason for the excessive crop injury.

The Branch continued to distribute Sodium Chlorate to Municipalities at cost. Another soil sterilant, Polybor Chlorate, was also distributed. This product is absolutely non-inflammable and is being used where Sodium Chlorate might create fire hazard. Amounts distributed in pounds for the last five years were as follows: Sodium Chlorate - 1948 - 137,000; 1949 - 180,500; 1950 - 207,940; 1951 - 290,000; 1952 - 330,626. Polybor Chlorate - 1952 - 25,784.

Almost all of the soil sterilants mentioned above were used to eradicate Toad Flax. (See Toad Flax areas under Agricultural Service Boards)

Weed Survey

Weed surveys were conducted in the Municipalities of Bow Valley, Fairview and Eureka - (that part of the M. D. included in Taber Irrigation District) by the Branch in co-operation with the Science Service, Dominion Department of Agriculture.

Briefly the results of this survey are as follows. Complete reports with maps are on file and may be referred to.

Bow Valley Municipality

Hoary Cress - 18 - 20 areas of severe infestations; that is, areas of one-half acre in size to several patches per quarter. Also 100 quarters with minor infestations ranging from a few patches up to one-half acre in size. Heaviest infestations are east of Strathmore and north of Gleichen.

Toad Flax - Three quarters badly infested and five other patches in roadside ditches and fields.

Field Binweed infests one quarter section and six quarters have many small patches.

Fairview Municipality

Annual weeds such as wild oats, flaxweed, mustards and stinkweed were more troublesome in this area than were the perennial weeds. The west side of the Municipality was very heavily infested with wild oats. Toad Flax was on twenty quarters but most of it has been or is being eradicated with Sodium Chlorate. Canada and Sow Thistle were in small patches on sixteen to twenty quarters.

Eureka (Taber Irrigation District)

Most of the weed infestations were along the ditch banks and on waste land near the ditches. Canada and perennial sow thistle occur mostly along irriga-

tion and roadside ditches. Field Bindweed was on twenty to thirty quarters varying from isolated plants to field infestations. Four infestations of Russian Knapweed were found. Toad Flax in only a few scattered infestations.

Halogeton (*Halogeton glomeratus*)

Halogeton is a weed somewhat resembling the Russian Thistle. It prefers dry areas and often infests overgrazed rangeland. It contains oxalates in the form of sodium and potassium salts which are very poisonous to livestock. This weed has caused considerable stock losses in the United States. To date none has been found in Alberta. Bulletins on this weed were obtained from the Utah State College and distributed to District Agriculturists and others in areas where this weed might establish itself.

Crown Lands

The Field Crops Branch continued to supply forage seed for weed infested Crown lands provided the farmer leased the accrued area affected. A total of 3,600 pounds of seed was supplied under this policy. 2,4-D was also supplied for weed control on Crown land to nearby farmers who were prepared to apply the chemical.

Weed Control Demonstrations

The five year demonstrations for the control of Tartary Buckwheat established at Royal Park and Stony Plain in 1951 were continued. Good results with 2,4-D were obtained at both locations. The forage crops, cut for hay, smothered the Tartary well. The Branch also applied the chemicals for the following demonstrations: (1) 2,4-D and Tartary Buckwheat at St. Albert and Stony Plain. (2) Maleic Hydrazide to retard the growth of grass on Highway 16, east of Edmonton. (3) Both 2,4-D and 2,4,5-T for brush control work in the M. D. of Stony Plain. (4) A demonstration comparing soil sterilants such as CMU, Sodium Chlorate and Polybor Chlorate for the control of Toad Flax. (5) A demonstration comparing MCP and 2,4-D on Canada Thistle, Smart Weed and Tartary Buckwheat.

Assistance was given to Field Supervisors indirectly and in some cases directly, to establish twenty-two cultural and twenty-six chemical weed control demonstrations in various municipalities. One Municipal District was assisted in conducting an irrigation ditch pasturing project for the control of Sow Thistle.

Roadside Seeding

The Field Crops Branch and the Department of Public Works co-operated to seed 556 miles of Government highways during 1952. A total of 31,750 pounds of seed was used on this project. This represents an increase of about one-third over 1951.

The policy of supplying grass seed for twenty miles of road per Municipal District as a demonstration to encourage roadside seeding was continued. The Branch supplied twenty Municipalities a total of 16,500 pounds of forage seed for this purpose.

Agricultural Service Boards

Five more Municipal Districts formed Agricultural Service Boards for the first time during 1952. The Municipal District of Smoky River, which was previously I. D. #130, did not re-organize a Board in 1952 but has indicated it plans to do so in the near future. This makes a total of thirty-four Boards operating during 1952. The new Boards were formed in the following Municipal Districts: Newell and Serviceberry organized in March; Flagstaff in September; Peace in December and the County of Vulcan in May.

Several of the Municipal Districts experienced difficulty in obtaining the services of a full-time Supervisor. Several changes in personnel occurred during the year. Each Board employed a full-time Supervisor and in addition fifty-two seasonal assistants were hired for the summer months.

The Municipal District of Vermilion River continued to combat Toad Flax in the control area established in 1950. The Department assisted with this project through a special agreement under the Agricultural Service Board Act. Farmers with small Toad Flax patches could obtain up to three kegs (336 lbs.) of Sodium Chlorate at one-third cost. The other two-thirds of the cost was divided equally between the Municipality and the Department. Those with patches too large to be controlled with three kegs were given financial assistance with cultural methods. They were paid \$5.00 per acre to a maximum of \$150.00 per quarter section for summerfallowing Toad Flax land. An Inspector spent all summer checking the quality of work being done and grants were paid only to those meeting terms of agreement with the Service Board. This Municipality used 74,480 pounds of Sodium Chlorate most of which was used in the Toad Flax area.

The Municipal District of Minburn set up a similar program under special agreement with the Department. This Municipal District used a total of 33,600 pounds of Sodium Chlorate mostly in the above Toad Flax area.

Field Supervisors prohibited the seeding of 21,347 acres to crop in 1953. They issued 1,043 notices to destroy weeds. A total of seventy-two quarter sections were farmed under supervision and six quarters were placed under reclamation during 1952.

Field Staff and Other Services

Seventeen Weed Inspectors administered the Noxious Weed Act in Improvement Districts. Fieldmen to assist Municipal and Improvement District Inspectors were stationed at Fairview, Vermilion, Edmonton and Medicine Hat. Twenty-one enlarged Municipalities and one County without Service Boards, employed a total of thirty-four Weed Inspectors. The total working force in Alberta during the summer on weed control was one hundred and forty-one men.

Weed Inspectors' meetings were held at Fairview and Lethbridge. Such meetings were designed to help Weed Inspectors (particularly newly appointed ones) with their work.

The Branch sponsored the annual Service Board Conference in Edmonton on April 8th and 9th. Field crop problems were discussed at Regional Meetings of Field Supervisors and District Agriculturists held at Lethbridge, Calgary, Vegreville, Edmonton and Falher.

Fertilizers

The Branch continued to take an active part in the work of the Fertilizer Committee. The seeding of the co-operative fertilizer trials placed in the Peace River Block was supervised by a Field Crops Fieldman. Members of the Branch assisted with harvesting and threshing of samples. The Branch in co-operation with the University of Alberta, Soils Department, put on fifteen nitrogenous fertilizer trials on heavy trash cover in the fall of 1952.

Field Days, Meetings, Radio Talks, etc.

During the year assistance was given to District Agriculturists taking part in twenty-nine meetings and Short Courses. Forty-two Field Days and twenty-one other meetings of various kinds were attended. Four radio talks were given and twelve articles were prepared for Agricultural Notes.

Soil Conservation

Unprotected soil, that is bare summerfallowed land, drifted both in the spring and fall of 1952. One severe wind storm in the fall of 1952 caused considerable damage in the northern part of the province.

The heavy crop of 1951 over most of the province left a large amount of straw and stubble. A trash cover campaign was conducted by the Branch early in 1952 to acquaint farmers with the benefits obtained from trash cover. A circular on the subject was prepared and 25,000 were distributed through District Agriculturists and Municipal offices. Several Field Days dealing with this problem were held during the spring and fall. Most of the machinery field days conducted through-

out the summer stressed trash cover. Some municipalities passed by-laws prohibiting the burning of straw and stubble except by permit from the Field Supervisor. The campaign was successful in many areas.

The Branch assisted one District Agriculturist with a "Seed Bed Preparation" competition. The inclusion of trash into the seed bed was stressed.

During the year three farmers requested assistance in laying out fields so they could be worked on the contour. Eighty acres of one farm at Halkirk were contoured and water holding terraces built. The Branch gave assistance in running the contour lines and advice on how to build the terraces. This land was farmed and cropped on the contour during 1952. Parts of two other farms in the Calgary area were contoured in the fall of 1952. All three will be watched closely in 1953.

Projects 1 and 2 of Soil Conservation and Weed Control with Forage Crops were continued during 1952. Under Project 1 the cost of forage seed, cereals and fertilizer was shared equally with applicants who were prepared to establish a soil conservation demonstration. A total of 37 farmers used 4950 pounds of seed to establish such demonstrations.

Project 2 under this policy is designed to assist Municipalities to handle farms under supervision or reclamation. The Department shares equally with the applicant, the cost of forage seed for thirty acres. Two districts took advantage of this policy during 1952. A total of 300 pounds of seed was used for this purpose.

Save the Soil Campaigns

Special projects such as "Save the Soil" campaigns were conducted by eleven District Agriculturists. A total of five hundred and sixteen farmers took part in these campaigns. The Branch issued twenty-seven "Save the Soil" certificates to those obtaining a score of 80% or more.

Seed Cleaning Plants

Fifty Plants approved by the Department were issued seed cleaning permits according to the Noxious Weed Act.

By the end of 1952 there were seven Government assisted farmer operated Municipal Seed Cleaning Plants in operation. Three of these were completed during the year, Marwayne in January, Vegreville in October, and Mundare in November. Construction was started on a fourth plant at Rosebud, but this plant was not quite completed in 1952.

During the 1951-52 season, the four original plants, Camrose, Westlock, Wetaskiwin, and Morinville, operating for the full season, and Marwayne operating from January 15th to the end of the season, handled approximately 950,000 bushels of seed grain. In addition to this, over 75,000 pounds of legume seed were rough cleaned.

It is expected that during the 1952-53 season the plants will handle well over 1 1/2 million bushels.

Besides the Government assisted Municipal plants there are sixty-six stationary and fifty-eight portable plants. All plants doing custom cleaning are under permit from the Field Crops Branch. As many of these plants, as time will permit, are inspected during the operating season.

Several of the stationary plants are first class plants, carefully operated, and are a real asset to the districts they serve.

A number of the portable plants serve their respective districts equally well. A few are capable of cleaning to registered seed grade, and many are turning out a good quality commercial seed. Several seed plants were remodelled during the year and the trend is towards better equipment, and more careful operation.

HORTICULTURE

P.D. McCalla

Tree Planting:

In 1952, the farmers of Alberta planted 1,963,155 trees, an increase of 13.9% over 1951. The Canadian Government Nursery Stations at Indian Head and Sutherland, Saskatchewan, supplied 90% of the Trees. The Alberta Government Nursery at Oliver supplied 6%, and the Provincial Horticultural Station, Brooks, provided 4% of the trees.

As in previous years, the two tree planters, owned by the Department, were used for demonstration purposes. In 1952, 72 tree planting demonstrations were held, these machines planting 154,585 trees. The demonstrations were held at the following locations: Stettler, Ponoka, Edmonton, Wainwright, Westlock, Falher, Olds, Calgary, Vulcan, Taber, Strathmore, Acme, Drumheller and Hanna.

On the basis of incomplete returns from District Agriculturists, the planting of Farmstead Shelterbelts was still the most popular in Alberta. The planting of trees along highways and municipal roads for snow protection and beautification was next, and field windbreaks for crop protection and erosion control was the least popular.

The weather in 1952 was ideal for tree planting. A heavy snowfall in the winter of 1951-1952, accompanied by a gradual moderation of temperature in the spring, insured a minimum loss of snow moisture through run-off. Soil moisture conditions were excellent over most of the province at planting time. More than average rainfall during the late spring and early summer ensured the trees getting off to a good start. The only serious losses were with hardwood cuttings of poplar and willow. This was due, in part, at least, to the poor condition of some of the cuttings because of extensive winter killing to the young wood before the cuttings were made. All rooted trees survived practically 100%, and made excellent growth during their first year.

Forest Nursery Station, Oliver

In 1952, 121,155 hardwood cuttings of poplar and willow, and 50,254 trees, were supplied to 429 applicants. This was an increase of 38.5% over 1951. As of December 31st, 1952, there were 360,000 conifer trees in the transplant beds and 874,500 in the seed frames. In addition to the evergreens, there are approximately 100,000 Manitoba maple, 40,000 green ash, 60,000 caragana, 30,000 American elm and 4,000 Manchurian elm. Smaller numbers of burr oak, mountain ash, Douglas fir and Siberian larch are also available for distribution.

The following quantities of seed were gathered, extracted and cleaned in 1952: 50 pounds of Manitoba maple; 25 pounds of White spruce; 15 pounds of Colorado spruce; 10 pounds of lodge pole pine; 110 pounds of green ash; 10 pounds of Siberian larch; 20 pounds of mountain ash and 5 pounds of American elm. The employees of our Nursery also made over 175,000 cuttings of poplar and willow. In addition, 125 sacks of lodge pole pine and 10 sacks of white spruce cones were received from Forest Rangers and Timber Inspectors of the Department of Lands and Forests. These will be processed during the winter of 1952-1953.

During the spring and summer months, six men were employed at the Nursery. This number is reduced to three during the winter. In addition, patients from Oliver Mental Hospital were used from time to time. They were particularly valuable at shipping time, and for weed control in the seed beds, which of necessity requires a great deal of hand work.

During the year, cement walks were built between the principal buildings. The grounds around the foreman's residence were landscaped, and a start made on gravelling the roads of the Nursery. Twenty-five acres were seeded to pasture mixture of alfalfa, brome and creeping red fescue. This will serve to control soil erosion as well as provide excellent hay for the dairy herd maintained by the Oliver Institute. This area will be brought into production as required. The trees which had winter killed in the shelterbelts established the previous year, were replaced.

Extension

The Supervisor of Horticulture spoke, in 1952, at nine Short Courses. He also spoke, in addition to those arranged by District Agriculturists, to twenty-two other meetings. All phases of Horticulture were discussed at these meetings, with particular interest in tree planting, Farmstead Planning, Planning and Planting the Home Grounds, and the Growing of Small and Tree Fruits in Alberta. In addition, he acted as judge at eight Horticultural Bench Shows and Agricultural Society Annual Fairs. For the most part, the presentation and quality of these exhibitions were better than in previous years. This was due, in large measure, to the excellent growing year in 1952, which enabled exhibitors to show their produce in the prime

of condition. It was still evident that, in some cases, those responsible for these fairs and exhibitions need, and would like, suggestions and help in the arranging and staging of horticultural exhibits.

Alberta Horticultural Association

The Alberta Horticultural Association held two general meetings in 1952. The annual meeting was held in Edmonton on January 12th. At this time, committees were appointed to prepare judging standards for the following horticultural classes; Urban Lots; Rural Areas; Fruit; Vegetables; Flowers, and Special Classes. The second meeting was held on August 23rd, in conjunction with the annual Calgary Horticultural Society's Bench Show. The preliminary reports of the judging committees were thoroughly studied at that time. The revised reports are to be presented at the annual meeting in 1953. In addition to the general meetings, the executive met from time to time.

During the year, nine local Societies became members of the provincial body. The Association ended its first year in a healthy financial condition.

REPORT OF THE LIVE STOCK BRANCH

W. H. T. Mead, Live Stock Commissioner
I. A. Coles, Supervisor of Feeder Associations
W. C. Gordon, Live Stock Supervisor
A. J. Charnetski, Live Stock Supervisor

Highlight of 1952 in the live stock industry of Alberta was the unprecedented announcement by the Dominion Health of Animals Branch on February 25th, that Foot and Mouth disease had been diagnosed in the area adjacent to Regina, Saskatchewan. Simultaneous with this announcement was the announcement by the United States Government placing an immediate embargo on all live stock except horses, all meats with exception of certain canned meats and practically all feeds, from any part of Canada entering the United States. This action had an immediate depressing effect on live stock prices and on the morale of the industry which, were further depressed by announcements soon to follow that British Columbia, Ontario, Quebec and later Manitoba had also placed embargoes on all live stock and live stock products from Alberta and Saskatchewan.

Immediately the disease was diagnosed, a strict quarantine was placed on eleven Municipalities in the Regina area with a buffer zone approximately fifty miles wide placed around the quarantine area. The quarantine and buffer area were later enlarged.

It was estimated at the time that 100,000 to 125,000 cattle and 60,000 sheep and lambs were on feed in Alberta feedlots with approximately 25,000 heavy steers ready for market. All outside markets for Alberta live stock were cut off and drastic price reductions took place. Embargoes were placed on feeder cattle from Edmonton, Calgary and Lethbridge stock yards by the Health of Animals division. Within a week of February 25th, prices dropped badly and markets were at a standstill. Excellent heavy steers that cost up to 32 to 34 cents into the feedlots were bid on as low as 17 to 18 cents with a few sales at 20 cents. Fat lamb prices dropped to 20 to 21 cents for lambs that had cost 32 cents into the feedlots. Feeders were holding and lambs were getting heavy. Many cattle feeders took their cattle off feed and in many cases this later proved to be a mistake.

On April 9th the Federal Minister of Agriculture announced a price support price of \$25.00 per cwt. for "good" steers basis Toronto. Calgary and Edmonton prices for "good" steers was announced as \$22.55. However, the floor price did not become operative until the end of April.

British Columbia relaxed restrictions and started taking live cattle and hogs from the Edmonton area about March 20th. All restrictions were later removed on Alberta stock and dressed meats and on July 9th, British Columbia announced removal of restrictions on all stock and dressed meats except the quarantine and buffer zones.

Alberta at no time imposed restrictions on the movement of live stock or meats, however, on May 6th a police check was put on all trucks carrying live stock coming from Saskatchewan in order to determine that quarantine regulations were not being violated. This check was in effect one month and did not reveal any violations.

On August 18th Canada was announced free of Foot and Mouth and all quarantine restrictions were lifted. It is announced that the United States embargo will be lifted March 1st, 1953.

The most serious loss from this outbreak was sustained by cattle and lamb feeders. The latter group failed to obtain any support of price and generally suffered the greatest losses.

REPORT OF - W. C. GORDON
Live Stock Supervisor (Cattle)

GENERAL

Despite a shortage of top quality hay, cattle wintered in good condition. An early dry spring enabled farmers to complete threshing of the 1951 crop. They were able to put cattle on stubble and early range. Spring losses were light with favourable weather for calving.

Due to the outbreak of Foot and Mouth disease in Saskatchewan in February, many feeders turned back to grass cattle that would normally have been sold for slaughter.

With abundant summer rain, gains on pasture were good. Pasture growth continued well into the fall giving a very long grazing season. The year closed with little or no snow cover in any part of the Province and with ample good quality feed in reserve in all districts.

The open fall enabled farmers to hold cattle on the farms and maintain uniform orderly marketing. Because there were no extremely heavy runs of cattle on the markets such as we experienced in 1951, embargoes on Alberta stock yards were at no time necessary. An increased flow of meats from coolers to the retail trade took place due to greater consumer demand for beef. Unfinished cattle moved readily back to farms and feedlots for further finishing. All these factors combined to produce a stable market at a time when there was grave concern that a surplus would develop with disastrous results to the cattle industry.

Cattle marketings for the year through the public stock yards and packing plants are about fifteen per cent less than last year.

Prices for pure bred breeding stock showed a drop corresponding to the reduced prices of commercial cattle following the outbreak of Foot and Mouth disease.

At the eighth annual sale of Shorthorn bulls held June 5th by Claude Gallinger, twenty-seven bulls sold for an average price of \$2,049.00. The top bull sold for \$4,600.00 to C. B. Carignan, Fairview, Alberta.

The fifty-second annual Calgary Bull Sale, which is normally held in March, was postponed one month because of the confusion and uncertainty created by the Foot and Mouth outbreak. A total of 856 bulls were sold for an average price of \$714.63. This was an increase in number sold of 17 percent over the previous year. The average price obtained was second highest since inauguration of the sale.

C. E. Jones, Balzac, Alberta paid \$5,500.00 for the Hereford bull "Domino Seth M R C 31st" -291146- bred by McIntyre Ranching Company Limited, Lethbridge. R. W. Wright & Son, Irricana, Alberta, paid \$5,300.00 for the Hereford bull "Royal Domino 60th" -306151- bred by J. M. Campbell & Son, Stavely. Hugh L. Sharp, Lacombe, Alberta paid \$3,300.00 for the Shorthorn bull "Rannoch Fortune" -323933- bred by T. G. Hamilton, Innisfail. W. L. McGilivray, Coalville, Alberta paid \$2,300.00 for the Aberdeen Angus bull "Jester Compress 112D" -105622- bred by Old Hermitage Farm, Edmonton.

AUCTION SALES OF PURE BRED CATTLE

CALGARY BULL SALE:

	1950		1951		1952	
	No. Sold	Av. Price	No. Sold	Av. Price	No. Sold	Av. Price
Shorthorn	219	\$442.76	133	\$825.56	175	\$536.40
Aberdeen Angus	171	424.30	70	963.57	92	698.75
Hereford	<u>772</u>	<u>594.03</u>	<u>507</u>	<u>1223.42</u>	<u>589</u>	<u>770.06</u>
Total all breeds	1162	\$540.55	710	\$1123.28	856	\$714.63

EDMONTON BULL SALE:

	1950		1951		1952	
	No. Sold	Av. Price	No. Sold	Av. Price	No. Sold	Av. Price
Shorthorn	93	\$404.46	123	\$541.50	75	\$466.27
Aberdeen Angus	20	323.75	8	610.63	14	640.00
Hereford	<u>118</u>	<u>431.35</u>	<u>82</u>	<u>911.77</u>	<u>124</u>	<u>618.94</u>
Total all breeds	231	\$411.21	213	\$686.64	213	\$563.94

LACOMBE BULL SALE:

	1950		1951		1952	
	No.	Av.	No.	Av.	No.	Av.
	Sold	Price	Sold	Price	Sold	Price
Shorthorn	145	\$311.89	117	\$600.00	123	\$333.90
Aberdeen Angus	127	372.67	107	725.00	148	368.46
Hereford	229	376.00	184	872.35	235	545.04
Total all breeds	501	\$356.60	408	\$755.35	506	\$442.00

LLOYDMINSTER BULL SALE:

	1950		1951		1952	
	No.	Av.	No.	Av.	No.	Av.
	Sold	Price	Sold	Price	Sold	Price
Shorthorn	36	\$336.81	38	\$606.18	50	\$344.60
Aberdeen Angus	-	-	-	-	1	525.00
Hereford	78	455.13	79	800.00	86	520.29
Total all breeds	114	\$413.77	117	\$737.05	137	\$456.20

CAMROSE BULL SALE:

	1950		1951		1952	
	No.	Av.	No.	Av.	No.	Av.
	Sold	Price	Sold	Price	Sold	Price
Shorthorn	29	\$272.93	30	\$410.66	22	\$250.23
Aberdeen Angus	1	180.00	1	350.00	-	-
Hereford	32	327.65	32	584.53	27	420.00
Total all breeds	62	\$299.67	63	\$498.01	49	\$343.78

LETHBRIDGE BULL SALE:

	1952 Spring sale		1952 Fall sale	
	No.	Av.	No.	Av.
	Sold	Price	Sold	Price
Shorthorn	2	\$312.50	6	\$435.00
Aberdeen Angus	2	390.00	1	400.00
Hereford	59	523.90	233	418.73
Total all breeds	63	\$513.57	240	\$417.56

The June survey of the number of cattle on Alberta farms for the past five years is as follows:

Year	No. of Head
1948	1,584,300
1949	1,465,000
1950	1,442,900
1951	* 1,563,000
1952	1,754,000

* Reported last year as 1,482,400 later corrected to census figures.
The increase in numbers from 1951 is 191,000 or 12.2 per cent.

The official reports of the Canada Department of Agriculture show for Alberta the following cattle and calf marketings and total value for 1948 to 1952 (inclusive):

Year	No. Cattle	Value	No. Calves	Value
1948	531,988	\$75,341,245.33	118,240	\$5,063,643.71
1949	526,958	80,624,000.00	126,089	6,304,000.00
1950	473,354	92,458,000.00	137,721	12,000,000.00
1951	385,660	102,007,070.00	92,649	11,320,781.00
1952	377,032	71,116,000.00	82,223	6,506,000.00

CATTLE AND CALF SHIPMENTS OUT OF THE PROVINCE

	1948	1949	1950	1951	1952
British Columbia	103,193	102,883	89,258	64,869	78,576
Saskatchewan	12,248	6,633	4,249	4,175	1,800
Manitoba	33,186	30,188	19,623	14,047	8,942
Ontario	42,940	49,706	48,908	44,398	16,525
Quebec	37,522	36,759	20,889	13,841	15,122
Nova Scotia	34	-	28	6	66
New Brunswick	-	-	22	-	-
U. S. A.	72,402	80,342	115,060	63,287	2,896
Newfoundland	42	71	-	-	-
Prince Edward Island	5	-	-	21	-
	<u>301,572</u>	<u>306,582</u>	<u>298,037</u>	<u>204,644</u>	<u>153,915</u>

THE CATTLE IMPROVEMENT POLICY

The cattle Improvement Policy operated on the following basis during 1952:

(1) The percentage contributed toward the cost of sires by the Department of Agriculture was ten percent with maximum assistance per sire fifty dollars as a basic policy.

(2) In Pure Bred Sire Areas assistance was fifteen per cent with maximum assistance per sire of seventy-five dollars.

(3) The policy was open to any bona-fide farmer other than pure bred breeders.

(4) Farmers were given an opportunity to obtain a second sire under the Policy by a change in regulations made November 1st, 1951. Nineteen-fifty-two was therefore the first full year that this change was in effect.

(5) A further change effective the same date was the appraisal of bulls selected by applicants from local breeders. If approved as to quality and price by the Live Stock Branch, the applicant receives the discount in purchase price, but is not given freight assistance.

During the year, 526 bulls were placed through this Policy comprising 74 Aberdeen Angus, 173 Shorthorn, 258 Hereford, 1 Galloway, 1 Red Poll, 15 Holstein, 3 Ayrshire and 1 Jersey.

Two hundred and eighty-two bulls were selected by the Department and shipped freight prepaid to the applicants.

Two hundred and forty-four bulls were appraised on breeder's premises for placement with applicants residing locally.

The following table shows the placement of bulls for the years 1948 to 1952 inclusive:

1948	727
1949	753
1950	249
1951	309
1952	526

LIVE STOCK LISTING BUREAU

Under this Policy, pure bred breeding stock, male and female is placed with pure bred breeders and others not entitled to come under the Live Stock Improvement Policies. There is no financial assistance by way of reduced purchase price or prepayment of freight. During the year, four bulls and eleven females were placed.

ARTIFICIAL INSEMINATION

Artificial breeding service was continued from the Breeding Station at Olds to breeders of pure bred Holstein at various parts of the Province and to grade herds in the Olds district.

Three Holstein bulls "Sovereign Masterpiece", "Glenafon Escort" and "Glenafon Clipper" were used in this service. Glenafon Clipper was sold during the year and in December a young bull "Rockwood Anthony Romonarch" was purchased from Rockwood Holsteins of St. Norbert, Manitoba and will be ready for service early in 1953.

The following table shows the volume of service provided to grade herds:

	1950	1951	1952
No. of herds	41	51	51
No. of cows bred	156	210	200

The following table shows the volume of service provided in pure bred herds:

	1950	1951	1952
No. of herds	93	119	96
No. of cows	474	436	411

Of the 411 cows bred, 235 were bred to "Sovereign Masterpiece"; 156 to "Glenafon Escort" and 20 to "Glenafon Clipper".

Mr. R. J. McKnight who had been acting as technician in charge at the Breeding Station, left the service of the Department in July and was replaced by Mr. H. P. Cross.

Three meetings were held during the year with Holstein breeders at Calgary, Red Deer and Edmonton and at each meeting the breeders present voted unanimously to have the service continued.

DAIRY HEIFER CALF POLICY

The policy of providing service in making calves available to 4 H dairy clubs was extended to include payment of transportation from the Edmonton assembly point to the club location. Payment of transportation began January 1st, 1952. During the year 177 calves were shipped to clubs, compared to 47 in 1951 and 103 in 1950.

COMMUNITY AUCTION SALES

Selling by auction continued at the stock yards at Calgary, Lethbridge and Edmonton with practically all the offering of cattle and calves sold in this manner.

As in years past, auction sales of cattle were held at country points under the sponsorship of a number of producer selling organizations. These sales were exceptionally well patronized and the price relationship to public markets was in most cases excellent. Sales under the direction of the Community Auction Sales Association, Pincher Creek, were held at Pincher Creek, Lundbeck, Fort MacLeod, Parkbend, Pakowki, Cardston and Whiskey Gap. A number of sales were held at some of those points. In addition sales were held by other organizations at Walsh, Medicine Hat, Brooks, Cadogan, Lea Park and Vermilion.

A total of 21,529 cattle were inspected through these sales, compared to 20,023 in 1951 and 19,610 in 1950.

REPORT OF - I. A. COLES
Supervisor of Feeder Associations

Twenty-six Associations operated during the 1951-52 feeding season under "The Feeder Associations Guarantee Act".

These twenty-six Associations had 642 members who fed 11,236 cattle and 6,750 sheep, utilizing a total credit of \$2,328,596.59.

Market conditions following the diagnosis of Foot and Mouth disease in Saskatchewan in February resulted in severe losses for most feeders and necessitated providing a policy for a carry-over of 2411 cattle and 1,412 sheep into the 1952-53 feeding season.

Total loans including interest outstanding at September 1st amounted to \$493,827.09.

FEEDER ASSOCIATION OPERATIONS 1951 - 52 SEASON

Association	Members	Cattle	Sheep	Amount of Credit
ANDREW-WILLINGDON				
Feeders' Ass'n., Ltd., ANDREW	17	178		\$ 39,045.70
BATTLE RIVER				
Feeders' Ass'n., Ltd., CAMROSE	27	617		106,275.19
BOWDEN				
Feeders' Ass'n., Ltd., INNISFAIL	28	457		97,700.27
BOW VALLEY				
Live Stock Feeders' Ass'n., Ltd.,				
BROOKS	25	378	971	100,212.07
CARSTAIRS				
Live Stock Feeders' Ass'n., Ltd.,				
CARSTAIRS	20	485		107,195.69
CENTRAL ALBERTA				
Live Stock Feeders' Ass'n., Ltd.,				
LACOMBE	28	528	258	106,666.30
CONDOR				
Feeders' Ass'n., Ltd., CONDOR	32	667		111,006.80
EAGLE HILL				
Live Stock Feeders' Ass'n., Ltd.,				
OLDS	21	397		74,637.51
EAST BOW VALLEY				
Live Stock Feeders' Ass'n., Ltd.,				
BROOKS	26	417	1,415	99,485.64
EAST CENTRAL				
Feeders' Ass'n., Ltd., LACOMBE	29	456		94,583.72
EAST OLDS				
Live Stock Feeders' Ass'n., Ltd.,				
OLDS	11	188		34,995.22
GARDEN CITY				
Feeders' Ass'n., Ltd., MAGRATH	15	227	1,359	73,598.70
HORSE SHOE LAKE				
Feeders' Ass'n., Ltd., INNISFAIL	25	441		94,025.00
INNISFAIL				
Feeders' Ass'n., Ltd., INNISFAIL	25	515		99,933.36
KNEEHILL VALLEY				
Feeders' Ass'n., Ltd., INNISFAIL	25	451		99,762.51
MANNVILLE				
Live Stock Feeders' Ass'n., Ltd.,				
MANNVILLE	35	639		99,268.05
MARWAYNE				
Live Stock Feeders' Ass'n., Ltd.,				
MARWAYNE	26	456		98,404.77
PONOKA				
Feeders' Ass'n., Ltd., PONOKA	9	85		16,108.03
RAVEN				
Feeders' Ass'n., Ltd., INNISFAIL	32	514		98,869.10

RAYMOND-MAGRATH				
Feeders' Ass'n., Ltd., MAGRATH	19	412	587	88,643.10
SOUTH SLOPE				
Live Stock Feeders' Ass'n., Ltd.,				
BROOKS	21	397	625	100,174.48
TABER				
Feeders' Ass'n., Ltd., TABER	15	323	1,155	99,915.49
TILLEY-ROLLING HILLS				
Live Stock Feeders' Ass'n., Ltd.,				
BROOKS	29	454	380	99,368.88
VERMILION & DISTRICT				
Live Stock Feeders' Ass'n., Ltd.,				
VERMILION	30	523		98,618.00
WAINWRIGHT-EDGERTON-CHAUVIN				
Feeders' Ass'n., Ltd., EDGERTON	34	557		92,574.07
WESTLOCK				
Feeders' Ass'n., Ltd., WESTLOCK	38	474		97,528.94
	642	11,236	6,750	\$2,328,596.59

FEEDER ASSOCIATIONS OPERATIONS 1938 - 39 to 1951 - 52

Feeding Season	No. of Associations	Members	Cattle	Sheep	Credit
1938-39	6	180	9,239	19,187	\$ 368,421.45
1939-40	12	351	16,248	20,287	775,125.21
1940-41	12	451	17,056	37,863	954,489.50
1941-42	15	408	14,945	41,157	1,117,186.08
1942-43	17	437	13,279	31,452	1,092,768.43
1943-44	16	395	11,639	53,768	1,191,641.50
1944-45	15	257	7,968	46,537	834,347.71
1945-46	15	319	9,556	60,845	1,098,291.77
1946-47	13	245	7,057	37,036	729,447.90
1947-48	13	239	8,088	26,241	859,922.29
1948-49	13	212	4,784	13,020	837,732.21
1949-50	10	237	4,978	8,948	622,759.22
1950-51	11	291	5,615	4,381	917,400.70
1951-52	26	642	11,236	6,750	2,328,596.59
		4,664	141,688	407,472	\$13,728,240.55

REPORT OF - A. J. CHARNETSKI

Live Stock Supervisor
(Sheep and Swine)

Swine:

Alberta experienced a sharp increase in swine production in 1952. Marketings were increased by strong 35 per cent as compared to an increase of over 32 per cent for Canada. The abundance of lower quality grains accounted for this increase. The United States embargo against Canadian live stock had a depressive effect on hog prices. Hog prices declined rapidly from \$29.00 per cwt. in January to \$25.00 by mid February. The Dominion Government, through its Agricultural Price Support Board authorized on February 16th, a price support on hogs until September 30th at \$26.00 per cwt., warm dressed weight for Grade "A" carcasses, basis Toronto stockyards - this worked out to \$23.75 for Edmonton and Calgary. There was very little upward price fluctuation from the support price. The original price support was extended to December 31st. On January 1st, 1953, floor price was reduced by \$3.00 per cwt.

On July 18th the Price Support Board began purchasing of canned pork. By the end of September the Board had purchased approximately sixty million pounds, the equivalent of about 779,000 hogs.

The quality of our hogs has deteriorated during the year. Only approximately twenty-two per cent graded "A" grade carcasses, compared to over twenty-five per cent in 1951. There was an increase of over two per cent in B3 hogs, this grade sells for only seventy-five cents per cwt., less than the "A" grade; this narrow spread is not sufficient incentive for production of higher quality hogs.

Due to strict quotas on grain marketings, many farmers are planning to market their surplus grain stocks through increased hog production. Consequently there are indications of slight increase in the number of gilts and sows that are being bred for spring farrowing.

In general, the pure bred hog business was good. Buyers at the sales and elsewhere recognized and paid well for good quality stock. Failure on the part of some breeders to reduce the incidence of Rhinitis and rigidly select their breeding stock has reduced the quality of seed stock available to commercial producers.

This office was responsible for dealing with many swine problems existing on the farms, as well as many other live stock problems from the standpoint of breeding, feeding, housing and labour saving devices.

A fair share of time was given to farm meetings and preparation of various material on live stock matters. There were thirty-five meetings held during the year with total attendance of 3,173 or an average of over ninety per each meeting.

FEDERAL - PROVINCIAL BROOD SOW POLICY

This policy has been operated jointly by the Dominion and Provincial Departments of Agriculture. However, because of lack of further interest in it, in the past several years, brought about by the availability of local supplies of commercial breeding gilts, the policy in question is now being discontinued.

THE SWINE IMPROVEMENT POLICY

The Swine Improvement Policy continues to provide useful service, not only in the placing of sires, but also in exerting some influence in the quality of pure bred swine herds. Under this policy an applicant may obtain a sire at cost in each two year period plus the prepayment of railway shipping charges. Those who do not qualify, including the purchasers of female breeding stock on which shipping charges are not prepaid, may obtain their requirements through this office under the Live Stock Listing Bureau.

The total swine placement under the Swine Improvement Policy and Live Stock Listing Bureau was as follows:

	Live Stock Listing Bureau		Imp. Policy	Total
	Gilts	Boars	Boars	Boars
1948	22	14	120	134
1949	19	20	145	165
1950	8	4	119	123
1951	5	5	129	134
1952	15	6	135	141

The 1952 totals include 29 Tamworth boars.

Table 1.

ALBERTA SWINE POPULATION - JUNE SURVEY

1949	847,100
1950	809,700
1951	1,088,000
1952	1,170,000

Table 2.

ALBERTA HOG GRADINGS FOR YEARS 1948 - 1952 INCLUSIVE

	1948 %	1949 %	1950 %	1951 %	1952 %
Grade A	23.21	22.13	25.00	25.12	21.43
				B1 43.04	42.86
Grade B	57.12	57.22	56.32	B2 3.77	3.52
				B3 7.12	7.87
Grade C	6.84	6.86	6.28	6.69	8.81
Light	1.03	0.95	1.40	1.06	1.18
Grade D	0.46	0.40	0.56	0.51	0.48
Heavy	2.94	2.92	2.03	3.00	3.74
Extra Heavy	2.47	2.69	1.77	2.56	3.32
Injured	0.06	1.05	0.04	0.05	0.04
Rgl.	0.56	0.56	0.51	0.54	0.53
Stags	0.42	0.45	0.45	0.49	0.41
Sows	4.89	5.77	5.64	6.05	5.81

Table 3.

EDMONTON SPRING SWINE SALE (No. Sold and Average Price)

	No.	1950	No.	1951	No.	1952
Yorkshire gilts	44	\$109.25	59	\$165.43	108	\$ 82.13
Tamworth gilts	2	91.25	11	128.19	8	102.50
Yorkshire boars	33	90.84	30	146.33	51	70.69
Tamworth boars	8	60.94	9	118.33	13	71.54

Table 4.

EDMONTON FALL SWINE SALE (No. Sold and Average Price)

	No.	1950	No.	1951	No.	1952
Yorkshire sows	131	\$72.63	129	\$90.00	127	\$65.30
Tamworth sows	8	76.25	7	95.00	9	72.22
Yorkshire boars	135	81.53	107	117.31	115	78.06
Tamworth boars	<u>23</u>	<u>80.67</u>	<u>15</u>	<u>99.00</u>	<u>19</u>	<u>87.60</u>
	297	\$74.03	258	\$101.99	270	\$71.91

Table 5.

CALGARY FALL SWINE SUMMARY						
SOWS	No.	1950	No.	1951	No.	1952
York. Oct.-Apr.	81	\$ 98.40	84	\$ 69.75	62	\$ 67.74
York. Prev. Oct.	3	106.66	1	75.00	8	75.31
Tam. Oct.-Apr.	18	76.56	5	60.00	5	53.50
Berk. Fem.	--	--	4	56.25	2	52.50
Female Total	102	\$ 94.61	104	\$ 68.62	77	\$ 67.21
BOARS						
York. Oct.-Apr.	94	93.03	78	81.41	54	79.81
York. Prev. Oct.	15	73.83	--	-	2	67.50
Tam. Oct.-Apr.	19	102.89	20	95.63	13	73.84
Tam. Prev. Oct.	1	80.00	--	-	1	60.00
Berk. Boar	3	99.17	2	73.75	1	75.00
Hamp. Boar	2	56.25	1	70.00	--	-
Boar Total	134	\$ 91.77	101	\$ 83.96	71	\$ 78.03
SWINE TOTAL	236	\$ 93.00	205	\$ 76.28	148	\$ 72.40

Table 6.

TOP PRICES FOR BOARS AND SOWS - FALL SALES						
	CALGARY			EDMONTON		1952
	1950	1951	1952	1950	1951	
York. Boar	\$225.00	\$155.00	\$130.00	\$235.00	\$360.00	\$190.00
York. Sow	215.00	200.00	115.00	200.00	200.00	180.00
Tam. Boar	125.00	130.00	100.00	115.00	145.00	115.00
Tam. Sow	155.00	75.00	65.00	115.00	125.00	165.00
Berk. Boar	105.00	75.00	--	--	--	--
Berk Sow	--	65.00	--	--	--	--

Table 7.

ALBERTA SWINE MARKETINGS, 1947 - 52 (INCLUSIVE) BY
GRADE AND PER CENT WITHIN EACH GRADE

	"A"	"B"	"C"	"D"	Light	Heavy	Extra Heavy	"E"	Sows	Total No.	Sales Value Total
1947-No.	242,720	600,174	78,648	3,720	10,072	38,565	38,975	11,662	80,686	1,105,222	\$37,621,765.88
%	21.96	54.30	7.12	0.33	0.92	3.48	3.53	1.05	7.31	100.00	
1948-No.	270,527	665,717	79,759	5,378	12,054	34,211	28,802	11,968	56,987	1,165,433	55,056,000.00
%	23.21	57.12	6.84	0.46	1.03	2.94	2.47	1.04	4.89	100.00	
1949-No.	204,624	529,200	63,414	3,702	8,752	26,989	24,912	9,697	53,427	924,717	44,533,403.01
%	22.13	57.22	6.86	0.40	0.95	2.92	2.69	1.05	5.78	100.00	
1950-No.	240,179	541,106	60,294	5,362	13,436	18,535	16,958	9,600	54,138	960,608	42,305,176.00
%	25.00	56.32	6.28	.40	0.56	2.03	1.77	1.00	5.64	100.00	
1951-No.	240,605	516,569	64,057	4,888	10,121	28,703	24,558	10,361	57,921	957,773	49,411,433.00
%	25.12	53.83	6.69	.51	1.06	3.00	2.56	1.08	6.05	100.00	
1952-No.	291,912	738,976	119,983	6,547	16,031	50,904	45,262		79,187	1,362,142	52,674,108.00
%	21.43	54.25	8.81	0.48	1.18	3.74	3.32		5.81	100.00	

SHEEP:

The year 1952 started off with considerable interest in sheep. Farmers in all parts of the Province became optimistic. This interest was created by high prices of feeder lambs during the fall of 1951. Demand for breeding ewes was very high at attractive prices; it exceeded available supplies. Unfortunately February proved to be the "dark month" not only to sheep, but all of the live stock industry. The outbreak of Foot and Mouth disease in Saskatchewan and the subsequent embargo against Canadian live stock shipments to the U. S. A. severely dampened this enthusiasm in sheep expansion.

Feedlot operators lost heavily by lack of export market for finished lambs. Domestic prices on fat lambs drooped to around \$22.00 per cwt. These same lambs cost \$32.00 to \$34.00 per cwt., when going into the feedlots.

Very few sheep were exported to the U. S. A. prior to the embargo. It is now indicated that the embargo will be lifted in March, however, it is not likely to benefit the Alberta commercial lamb feeders. At the present time market reports indicate practically no difference on the price of lambs in the two countries.

Wool producers experienced a fairly severe price recession on their 1952 wool clips. Domestic wools ranged from 33 to 36 cents per pound and range wool 40.5 cents to 46.5 cents per pound, compared to 60 cents in 1951.

Wool is now under definite grading regulations. This work is being carried out by the Dominion wool graders. There are indications that the quality of market wool requires greater attention and care at shearing time. Wollen mills are very critical of the dark and black leg clips from black pointed sheep being mixed in with good wool. This practice if continued is likely to further widen the price between domestic and range wool.

Winter feeding of lambs is down from last year. There are approximately 40,000 feeder lambs and 4,000 feeder ewes in the feedlots this winter. The average price for feeder lambs was 15 cents per pound.

THE SHEEP IMPROVEMENT POLICY

The Sheep Improvement policy continues to serve well the smaller sheep men of this Province. Those unable to locate suitable rams locally, as well as those who are not able to attend one of the regular sheep sales, may obtain their rams under the Policy in question. Eligible applicants may obtain at cost (including prepaid shipping charges) one or two rams in each two year period. Those who do not qualify under the Policy may obtain rams and ewes under the Live Stock Listing Bureau.

The total placement of rams and ewes is tabulated hereunder:

YEAR	Live Stock Listing Bureau		Imp. Policy	
	EWES	RAMS	RAMS	TOTAL RAMS
1949	-	3	22	25
1950	-	-	21	21
1951	-	1	52	53
1952	36	2	38	40

Placements consisted of: 22 Suffolk, 4 Columbias,
3 Corriedale, 3 Rommelets,
2 Rambouillet, 3 Cheviots,
1 Leicester.

Table 1.

ALBERTA SHEEP POPULATION - JUNE SURVEY

1946	666,800	1950	414,500
1947	613,800	1951	416,600
1948	448,600	1952	387,000
1949	441,800		

Table 2.

ALBERTA COMMERCIAL SHEEP MARKETING AND VALUES

Year	Stock Yards	Plants	Direct Export	To Country Points	Total	Value
1946	83,515	214,574	1,671	-	289,183	\$ 3,053,772.48
1947	84,952	202,560	1,475	-	299,564	2,917,800.00
1948	49,117	143,268	23,347	-	215,732	3,063,531.85
1949	45,941	91,177	28,032	7,162	172,312	2,969,056.98
1950	36,520	59,283	68,323	4,051	168,177	3,745,302.00
1951	36,062	51,658	5,044	4,160	96,924	2,674,386.00
1952	43,749	84,862	87	4,388	133,086	2,432,392.00

Table 3.

EXPORT OF PURE BRED SHEEP FROM ALBERTA TO U.S.A.

Year	No. of Head
1946	1,124
1947	1,938
1948	1,453
1949	998
1950	1,197
1951	700
1952	44

Table 4.

CALGARY SUMMER SALE OF STUD RAMS AND EWES

Sold In:	Breed	RAMS			EWES		
		No.	Av. Price	Top Price	No.	Av. Price	Top Price
1951	Suffolk (Yrlgs)	10	\$105.00	\$ 160.00	8	\$125.00	\$220.00
	Suffolk (L)	14	173.57	1000.00	10	119.00	180.00
	Hampshire (Yrlgs)	2	92.50	105.00	2	62.50	65.00
	Hampshire (L)	1	150.00	150.00	-	-	-
1952	Suffolk (Yrlgs)	5	77.00	135.00	6	149.17	290.00
	Suffolk (L)	8	380.63	1050.00	6	114.17	150.00
	Hampshire (Yrlgs)	2	50.00	50.00	-	-	-
	Hampshire (L)	1	60.00	60.00	5	57.00	60.00

Table 5.

CALGARY PURE BRED SHEEP - FALL SALE

Breed	1950		1951		1952	
	No. Sold	Av. Price	No. Sold	Av. Price	No. Sold	Av. Price
Hampshire Ewes (1 yr)	25	\$ 46.64	22	\$ 65.27	1	\$100.00
Hampshire Ewes (L)	12	50.67	5	71.60	5	53.00
Suffolk Ewes (1 yr)	19	95.00	93	55.59	41	62.56
Suffolk Ewes (L)	40	98.75	67	68.73	41	55.00
Southdown Ewes (1 yr)	3	43.67	4	53.75	8	34.06
Southdown Ewes (L)	-	-	-	-	-	-
Cheviot Ewes	19	45.58	-	-	26	35.96
Rambouillet Ewes	-	-	-	-	-	-
Northcountry Cheviots	-	-	-	-	1	155.00
	118	\$ 72.25	191	\$61.70	123	\$ 53.23
Hampshire Rams (1 yr)	8	102.94	18	\$ 70.14	17	\$ 64.56
Hampshire Rams (L)	24	97.92	31	60.32	9	82.78
Suffolk Rams (1 yr)	21	79.17	38	76.38	42	53.21
Suffolk Rams (L)	99	90.81	151	66.67	53	60.09
Corriedale Rams	2	100.00	9	155.55	5	81.00

Breed	1950		1951		1952	
	No. Sold	Av. Price	No. Sold	Av. Price	No. Sold	Av. Price
Rambouillet Rams	-	-	-	-	-	-
Cheviot Rams (1 yr)	20	\$ 59.00	18	\$ 37.22	11	\$ 37.27
Southdown Rams (L)	7	45.00	8	48.75	3	38.33
Northcountry Cheviots	-	-	2	137.50	8	59.06
TOTAL	181	\$ 86.55	275	\$ 68.50	148	\$ 58.55
Grade Ewes	100	\$ 27.80	76	\$ 35.66	50	\$ 21.88

Table 6.

EDMONTON PURE BRED SHEEP - FALL SALE

Breed	1950		1951		1952	
	No. Sold	Av. Price	No. Sold	Av. Price	No. Sold	Av. Price
Suffolk Ewes	88	\$ 50.94	41	\$ 70.48	51	\$ 47.44
Oxford Ewes	2	25.00	2	43.75	2	20.00
Shropshire Ewes	-	-	-	-	-	-
Southdown Ewes	-	-	-	-	-	-
Cheviot Ewes	2	33.50	2	65.00	3	41.60
Hampshire Ewes	5	41.20	1	57.50	14	27.50
	97	\$ 49.55	46	\$ 78.16	70	\$ 42.43
Cheviot Rams	12	\$ 34.79	7	\$ 57.85	6	\$ 52.89
Suffolk Rams	73	57.23	86	80.20	76	54.87
Oxford Rams	4	56.88	4	56.25	6	55.83
Shropshire Rams	-	-	-	-	-	-
Southdown Rams	-	-	2	70.00	2	30.00
Hampshire Rams	17	40.59	7	74.64	16	51.79
TOTAL	106	\$ 52.00	106	\$ 77.26	106	\$ 53.86
Grade Ewes	-	-	-	-	-	-

Table 7.

CANADIAN EXPORT OF SHEEP AND LAMBS

	To Great Britain No.	Value	To United States No.	Value	Total Export No.	Value
1948			51,407	805,434	51,909	815,407
1949			40,863	890,715	41,410	897,800
1950			87,140	1,939,558	87,648	1,952,132
1951			31,387	1,072,332	31,727	1,078,406
1952			357	14,323	611	20,140

CANADIAN EXPORT OF MUTTON AND LAMB

	To Great Britain No.	Value	To United States No.	Value	Total Export No.	Value
1948	1,569,000	269,703	2,784,500	1,125,181	5,056,100	1,645,934
1949			3,601,100	1,551,822	3,955,900	1,709,109
1950			2,665,800	1,346,555	2,760,700	1,402,215
1951			2,677,700	1,657,845	2,737,200	1,697,897
1952			11,100	4,527	46,300	30,307

CANADIAN IMPORTS OF MUTTON AND LAMB

Imported from:	1952	1951	1950	1949	1948
United Kingdom	2,270	7,660	3,985	1,450	600
United States	86,843	51,877	42,249	26,425	52
Australia	980,281	1,839,748	428,431	-	-
New Zealand	1,422,431	1,545,839	11,328	-	-
Other Counties	169,524	54,080	-	-	-
TOTAL	2,661,349	3,499,204	485,993	27,875	652

ALBERTA SHEEP AND LAMB MARKETINGS

	LAMBS		SHEEP			OUTWARD MOVEMENT TO:					TOTAL INWARD MOVEMENT	
	Good	Common	Bucks	Feeders	Good	Common	Public Stock Yards	Packing Plants	Direct on Export	Country Points in other Prov.		
1951	62770	4827	1620	9059	6250	3194	36062	51658	5044	4160	96924	18548
1952	93451	15615	930	7141	8127	3347	43749	84862	87	4388	133086	14848

HORSES

Continued mechanization of farms and other industries, coupled with relatively high prices of other live stock resulted in further reduction in the number of horses raised.

One horse sale was held at Calgary at which 399 head averaged \$79.40 per head, compared to the 1951 sale when 138 head sold at an average of \$97.50.

Slaughter of horses continued at a number of plants for animal foods and at the Edmonton plant of the Canadian Co-operative Marketing Association for animal foods and sale to retail stores selling for human consumption.

During the year the Edmonton plant of the Canadian Co-operative was sold to Alsash Processors.

Prices for slaughter horses were generally higher than in previous years indicating mainly a strong demand for animal food in relation to a lesser supply.

The 1946 census of horses on farms in Alberta was 469,169. The 1951 census showed 261,133. The June survey of 1952 estimated horses on farms in Alberta at 239,700.

Due to lack of interest in horse breeding the Stallion Enrolment Act was repealed. This was done by passage of Chapter 88 of the Statutes of Alberta which became effective on April 10th.

ROYAL WINTER FAIR, TORONTO

An exhibit of Alberta live stock totalling 12 carloads was shipped to the twenty-fourth Royal Agricultural Winter Fair which was held in Toronto. November 14th to 22nd. Breed selectors approved 24 horses, 95 cattle, 30 sheep and 18 swine, owned by 42 exhibitors to represent Alberta.

The shipment was handled by the Canadian National Railways and a satisfactory run was made both ways.

Freight charges on the shipment were borne seventy-five per cent by the Federal Department of Agriculture and twenty-five per cent by the Alberta Department. In addition, the Alberta Department paid decking and feed costs from points of assembly, which were Calgary and Edmonton, until the stock was returned to points of assembly.

The cars leaving each of these points joined as a special train at Saskatoon. L. M. Rye of Edmonton was supervisor of the entire shipment.

The following were received on exhibits:

	Horses	Cattle	Sheep	Swine	TOTAL
Grand Champion	1	2	-	-	3
Reserve Grand Champion	2	1	-	-	3
Senior Champion	1	2	3	-	6
Reserve Senior Champion	2	1	3	-	6
Junior Champion	1	-	-	-	1
Reserve Junior Champion	1	-	-	1	2
Championships	2	4	3	-	9
Reserve Championships	3	3	3	1	10
1st prize	3	12	9	1	25
2nd prize	6	12	5	3	26
3rd prize	6	14	5	1	26
Other Prizes	<u>16</u>	<u>57</u>	<u>10</u>	<u>11</u>	<u>94</u>
TOTAL	44	108	41	18	211

The grand champion awards were as follows: Grand Champion Hereford bull was won by Albert Beiber, Ponoka with "Fieldman" his entry in the Senior Yearling class. Grand Champion Red Poll female was won by Joseph Marshall of Innisfail with "Clover Lil's Peony". Grand Champion Percheron mare was exhibited by Hardy E. Salter, Calgary.

The market steers which have always been a strong point of the Alberta exhibit, again made a very creditable showing. Ten steers made up this exhibit and took four firsts, three seconds, one third and one fourth and one fifth.

Frank Radau, Bowden had Champion and Reserve Champion Hereford steers and the Champion Hereford was made Reserve Grand Champion of the Show.

Ed Noad, Claresholm had the Champion Shorthorn steer and R. Y. Secord and Son, Winterburn the Reserve Champion Shorthorn.

Six separate Sale of Stars were held in conjunction with the Royal. The table below shows the sale results:

	1951		1952	
	No. Sold	Average	No. Sold	Average
Shorthorn (Scotch)	34	\$1,234.00	38	\$ 844.74
Hereford	21	1,105.00	54	732.41
Aberdeen Angus	28	926.00	36	1,570.14
Dual Purpose Shorthorn			28	501.00
Ayrshire			48	439.00
Jersey			45	1,079.00

THE STOCK INSPECTION ACT

Stock inspection staffs were maintained at Edmonton, Calgary, Lethbridge and Winnipeg, with Deputy Stock Inspectors at Medicine Hat, Pincher Creek and Lloydminster. During the year a total of 517,134 head of stock were inspected as marketed, compared to 607,127 head during 1951; a decrease of 15 per cent. Inspection of stock going back to feedlot, cover crop and pasture, on which the purchaser is given brand clearance totalled 80,577 head, bringing the total number of stock inspected to 597,711 head.

Inspectors held approximately 1,000 head of stock back for further investigation of ownership. Of this number, the proceeds of sale of 681 head was held up pending further investigation. The proceeds of sale of 73 cattle was forwarded to the Live Stock Commissioner's office for final determination of rightful ownership.

Close co-operation was maintained between inspectors and R. C. M. Police. Additional emphasis was placed on the work of tracing the users of unregistered brands to eliminate that undesirable practice as far as possible.

Satisfactory inspection arrangement at Lloydminster stock yards has been difficult because of limited volume and mixed marketing of Alberta and Saskatchewan cattle.

Information on origin of stock, made possible by brand inspection records, assisted greatly in clearing cattle to the B. C. market during the period which that Province placed a partial embargo on Alberta cattle due to the Foot and Mouth situation.

BRAND ACT

Interest continued high in the registration and renewal of brands. During the year there were 1,520 new brands recorded, consisting of 1,457 cattle, 62 horse and 1 poultry. Transfers recorded totalled 316. Total of brands renewed was 5,162 made up of 4,437 cattle, 721 horse, 1 poultry and 3 sheep brands.

Strays, searches and certified extracts numbered 400. Four hundred and fifty-five butcher and hide dealers' licenses were issued; making a total of 7,853

transactions carried out through the Brand Office.

The approximate number of brands in good standing at the end of the year was as follows :

Year	1949	1950	1951	1952
Cattle	21,040	22,231	23,928	25,385
Horse	6,793	6,800	6,858	6,900
Poultry	31	26	22	25
Sheep	23	18	19	18
Fox	48	17	17	12

THE ALBERTA LIVE STOCK AND LIVE STOCK PRODUCTS ACT

During the year 679 live stock dealer licenses were issued; 518 to dealers and 161 to dealer's agents.

One inspector operating under this Act carried out a number of investigations and several convictions were obtained for violation of dealer regulations. Some licenses were cancelled and applications were refused.

Licenses were issued to thirteen wool buyers and collectors and to four wool warehouses.

DOMESTIC ANIMALS (UNORGANIZED TERRITORY) ACT

A number of new pound districts were established and alterations made in a number of existing pounds. Stray horses with little or no value continued as the most troublesome feature of this work. Complaints were received from four different areas of horses running at large in substantial numbers, but arrangements could not be completed for gathering and disposal, that was consistent with the legislation and satisfactory to the residents.

THE PURE BRED SIRE AREA ACT

On January 1st, 1952 the M. D. of Athabasca # 103 became a pure bred sire area under the above Act. The M. D. of Vermilion Valley # 71 became a pure bred sire area on February 1st, 1952.

There were a number of enquiries during the year from other areas and there is evidence of considerable activity in some areas for the formation of more pure bred sire areas.

Excellent co-operation and assistance from members of the R. C. M. Police has been present at all times. Assistance from the Highway Traffic Board inspectors in enforcing regulations related to truck movement of stock was continued. Assistance and co-operation received from these two groups, as well as from live stock sale organizations, breed associations, exhibition associations and the live stock trade in general is greatly appreciated and hereby acknowledged.

REPORT OF THE DAIRY BRANCH

D. H. McCallum	Dairy Commissioner
L. M. Silcox	Supervisor, Dairy Factory Inspection
J. B. Linneboe	Supervisor, Dairy Branch Laboratory
R. P. Dixon	Supervisor, Dairy Cattle Improvement
B. J. McBain	Supervisor, Dairy Cost Study
L. H. Arnold	Supervisor, Frozen Food Locker Plants
A. F. Bennett	Dairy Statistician

GENERAL REVIEW

Milk production continued to show a decline during 1952. The estimated total production amounted to 1,624,903,000 lbs., a reduction of 1.7% below that of the preceding year. Pasture conditions were very good throughout the season and they extended late into the fall.

There were 280,000 cows reported for milk purposes as at June 1st, 1952 compared with 277,600 for 1951. This indicates a slight increase of 2400. Preliminary estimates for the June survey of 1951 showed 292,400 cows but this estimate was revised to 277,600 following the census taken the same year. A review of dairy cattle population statistics indicates that the 1951 and 1952 total is less than that of 1920 or any of the intervening years. However, it is gratifying to report that production per cow has more than doubled during that period.

The trend of recent years to use less of the total milk supply in the manufacture of butter and cheese continued in 1952. Fluid sales, ice cream and miscellaneous factory products showed substantial gains over previous years.

The total value of all products amounted to \$56,884,000 a reduction of less than half a million dollars below the all time high of 1951. Prices for butter, cheese and milk consumed or fed on farms were lower, whereas some increase was noted in ice cream and those products classified under the general heading of fluid sales.

Creamery butter and factory cheese quality again showed a slight improvement to establish new all time records. The high quality of these products was further emphasized by the numerous prizes won at the major exhibitions including the grand Championship at Brandon, C. N. E., Toronto and the Royal Winter Fair.

ESTIMATED FARM VALUE OF ALBERTA MILK PRODUCTION, 1952

The following table shows the quantity, farm value and utilization of Alberta milk production during 1952 in comparison with 1951.

	Year	Pounds	Milk Equivalent Pounds	Percent of Total	Price	Value
Butterfat for	1952	22,681,000	648,074,000	39.9	\$.5959	\$13,515,000
Creamery Butter	1951	23,747,000	678,533,000	41.0	.6360	15,108,000
Farm Dairy Butter	1952	5,095,000	119,376,000	7.4	.56	2,853,000
	1951	6,050,000	141,752,000	8.6	.58	3,509,000
Milk & Butterfat for Ice Cream	1952		41,274,000	2.6	2.50	1,031,000
	1951		37,962,000	2.3	2.59	982,000
Milk basis						
Milk for Cheese-making & Concentrating	1952		59,622,000	3.6	2.74	1,631,000
	1951		54,289,000	3.3	2.96	1,609,000
Milk & Cream Fluid Consumption Milk basis	1952		332,957,000	20.5	4.25	14,145,000
	1951		313,085,000	18.9	4.02	12,591,000

Farm Home Consumed	1952	185,900,000	11.4	2.43	4,517,000
	1951	196,000,000	11.9	2.59	5,076,000
Fed Farm Animals	1952	237,700,000	14.6	2.43	5,776,000
	1951	232,000,000	14.0	2.59	6,009,000
Kept on Farms					
Skimmilk from Creamery Butter and Skimmilk and Buttermilk from Dairy Butter	1952	683,286,000		.32	2,187,000
	1951	734,548,000		.33	2,424,000
Total	1952	1,624,903,000	100		\$45,655,000
	1951	1,653,621,000	100		47,308,000

The following table shows the production and values of dairy products manufactured and processed in Alberta:

ESTIMATED PRODUCTION & VALUE OF FACTORY DAIRY PRODUCTS
1952 (Preliminary) COMPARED TO 1951

Creamery Butter lbs.	1952	27,660,000	\$.5875 per lb.	\$16,250,000
" " "	1951	28,960,000	.6135 " "	17,767,000
Cheddar Cheese, lbs.	1952	2,022,000	.415 " "	839,000
(including net increase in processing)	1951	2,080,000	.437 " "	909,000
Ice Cream, gallons *	1952	2,293,000	1.57 per gal.	3,600,000
	1951	2,109,000	1.57 " "	3,311,000
Fluid Milk Sales, lbs.	1952	251,076,000	5.75 per 100 lbs.	14,425,000
(including processing charges)	1951	239,235,000	5.41 " " "	12,947,000
Cream as Milk, lbs.	1952	81,881,000	4.13 per 100 lbs.	3,383,000
Fluid Sales (including processing charges)	1951	73,850,000	3.97 " " "	2,931,000
Skimmilk and Buttermilk Sales for Human Consumption (including processing charges)	1952	8,902,000	3.21 per 100 lbs.	286,000
	1951	6,866,000	1.45 " " "	100,000
Skimmilk, Buttermilk, lbs.	1952	31,241,000	.32 per 100 lbs.	100,000
	1951	33,675,000	.33 " " "	111,000
Whey, lbs.	1952	16,894,000	.16 per 100 lbs.	27,000
	1951	17,412,000	.165 " " "	29,000
Miscellaneous Manufactured Products **	1952			2,641,000
	1951			2,187,000
Total	1952			\$41,551,000
	1951			\$40,292,000

* Mix Converted to Ice Cream on basis of 100% overrun.

** Includes concentrated milk products, Cottage Cheese, Gouda Cheese, Whey Butter, Yoghurt and Canned Cream.

DAIRY FACTORY INSPECTION AND INSTRUCTION SERVICE

During 1952 dairy factory inspection and instruction work was again conducted by 10 inspectors located in various districts throughout the province. The enforcement of the Dairymen's Act and its regulations concerning grading, testing, weighing and the checking of payment records for milk and cream purchased from producers is regarded as the principal duty of these men. However, the scope of the inspectors work has widened considerably and much time is spent on instruction work with plant personnel in addition to the inspection of frozen food locker plants covered in a separate section of this report.

A total of 1,634 inspections were made at creameries, cheese factories, concentrated milk plants and dairies. Official gradings were made on 66,936 cans of cream and 25,931 samples of milk and cream were officially tested. In addition, a large number of milk shipments were checked for quality by the recognized tests.

The instruction work involves the application of modern research findings to the production, manufacture, processing and distribution of all dairy products. Since any finished product is no better than the raw material from which it is made, the encouragement of high quality milk and cream constitutes an important part of the instruction program. Practical quality tests, both chemical and bacteriological, are used to determine the quality of individual shipments. Where the need is indicated, recommendations from the inspectors lead to improved quality. The regular checking of patrons' cans for rusting, open seams and plant sanitizing procedures is an important part of this program. Cans considered unsuitable as containers for dairy products are condemned and the owners notified.

Special plant surveys including the lifting of water samples for chemical and bacteriological analyses direct attention to faulty or improperly sanitized plant equipment. Inspectors co-operate with and give considerable assistance to plant personnel on calculations which involve standardizing composition of all products. The margin between legal composition of product and economy of operation is exceedingly narrow. Instruction and encouragement through special competitions, based on their yearly work, have developed a high degree of proficiency among many of the plant men.

Licenses are required by all those engaged in grading cream and testing milk or cream. Each inspector must review and adjudicate the experience and qualifications of each prospective licensee. Practical and written examinations are given by the inspectors. During the year 245 licenses were renewed and 38 new licenses were issued.

Butter and Cheese Quality.

New all time records for both creamery butter and cheese quality were established during 1952. 95.4% of all butter graded and 90.4% of the cheese qualified as first grade. An imposing list of 148 butter awards was won by Alberta creameries at five major Canadian Exhibitions. Alberta's record for top scoring exhibits and championships was outstanding. It included the Grand Championships at the Toronto Royal, The Canadian National and Brandon Exhibitions while an Alberta entry was tied for top score at Ottawa and won the Reserve Championship at London. Alberta cheesemakers also made a very creditable showing by winning six awards against Canada's best at the Royal Winter Fair, Toronto.

Carefully planned quality programs, conscientious grading and numerous competitions are largely responsible for Alberta's showing in both commercial and exhibition quality of dairy products. Many of the competitions are based upon the plant record throughout the whole year. Other competitions, applied locally, are designed to encourage greater interest in high quality milk or cream. These are usually held in conjunction with Dairy Field Days or Agricultural Fairs. Officials of the Dairy Branch act as judges, analyse yearly records, prepare and publish announcements covering details of these competitions.

Check Weighing of Butter and Cheese.

There were 2,490 boxes of butter check weighed representing 1,278,448 pounds, which included a few boxes of whey butter. This was considerably lower

than last year owing to fewer offerings being made to the Agricultural Products Board.

A total of 205 boxes of cheese were check weighed in shipments totalling 1,485 boxes.

Dairy Plant Changes.

Ninety-two creameries operated during the year, however, two plants discontinued operations and the buttermaking equipment was dismantled. The trend to install milk pasteurizing equipment at country creameries continued with the result that at present only 35 plants manufacture butter exclusively. Ownership of the City Dairy, Lethbridge and the High River Creamery was changed during the year, while the Maple Leaf Creamery, Calgary moved to a new location.

Ten cheese plants were again in operation during 1952. While milk receipts increased by 5% the quantity of cheese manufactured shows a slight decrease due to heavier demands from the fluid milk trade. One plant changed ownership during the year while another plant discontinued operations.

A total of 73 milk and cream pasteurizing plants, the same as in 1951, operated during the year. Milk pasteurization was commenced at three new points and at two other points the dairy was amalgamated with the local creamery business. At another 3 points the local plant was closed and the local plant business was absorbed by firms operating out of larger centres. A change of ownership affected three other dairies.

Ice cream manufacturing was carried on as a separate department in 14 dairies or creameries.

One condensery and one skim milk powder plant operated during the year. Ten other plants converted by-products into milk solids not fat by the roller process.

LABORATORY SERVICE

Knowledge of the work performed by the Laboratory may be obtained by listing the material submitted for analysis as shown in the following table:

Butter samples for moulds and yeasts	3,669 samples
Water samples from dairy factories	47 "
Bacteriological creamery surveys (12 surveys)	91 "
Butter samples for pH	1,531 "
Milk samples for mastitis control service	2,394 "
Milk plant control service	2,583 "
Milk samples for cow testing service	6,232 "
Cheese samples for extraneous matter	170 "
Egg products	277 "
Miscellaneous	286 "
Total	17,280

An essential characteristic of high grade butter is that it exhibit good keeping qualities. For many years the keeping quality of Alberta butter has been measured through the mould and yeast count. The present low count when compared to those of previous years is illustrated by the following table. The marked improvement since the Service commenced in 1925 speaks well of the work of the creamery inspectors and the creamery personnel :

Classification in Percentage

Year	No. of Analysis	Excellent (0 - 10)	Good (11 - 50)	Fair (51 - 100)	Poor (over 100)
1925	686	3.6	12.7	12.1	71.6
1935	2,177	55.4	17.9	7.7	19.0
1945	4,050	68.2	14.9	5.7	11.2
1952	3,669	75.2	13.8	3.6	7.4

During the year the laboratory was equipped to examine cheese for extraneous matter. Samples from 170 vats of cheese were submitted representing all cheese factories in operation. The objective is to have all cheese manufactured conform to class 2 or better. As will be seen from the following summary several vats were classified in class 3 and 4 which are considered unsatisfactory; however, under the proper guidance and with the co-operation of the cheesemakers it is hoped that there will be much improvement during the coming year.

Classification of Cheese According to Amount of Extraneous Matter Present
Number of Vats in each Classification

No. of Vats Examined	Class 1	Class 2	Class 3	Class 4
170	8	126	33	3

In manufacturing or processing dairy products, and particularly in butter-making, it is essential that a pure water supply be provided. It is therefore encouraging to find a number of factories submitting samples of well water periodically for examination.

One of the most important and at the same time rather difficult step in the buttermaking process is that of adjusting the acidity of the product to its proper level. In order to keep the buttermaker informed as to this acidity (pH) of his product the laboratory has adopted a practice of running monthly checks on the pH of the butter manufactured at all creameries. The following table giving the results of pH determinations over a period of years indicates the pH range is being more effectively controlled. During 1952 approximately 90 percent of the churnings examined came within an pH range of 6.7 - 7.7 indicating the value of this service:

Percentage								
pH Range	1945	1946	1947	1948	1949	1950	1951	1952
Over 7.7	6.6	1.6	3.5	3.4	5.0	5.9	8.7	6.3
7.3 - 7.7	16.6	27.3	19.2	17.9	32.6	33.8	39.7	44.0
6.7 - 7.2	46.3	54.8	64.5	67.6	55.7	55.4	46.3	45.8
6.2 - 6.6	25.3	14.7	11.0	9.1	4.7	4.0	4.5	3.4
Below 6.2	5.2	1.6	1.9	2.0	2.0	0.9	0.8	0.5

The milk plant Laboratory Control Service has been in greater demand and during the year several dairies, mostly located in the central part of the province, made application for a regular monthly service.

In many instances where the quality of the finished, pasteurized product was not as high as desirable, the difficulty could be traced to an inferior raw milk supply. It therefore appears that many plants should give assistance to producers

in order to receive a better raw product.

It is regrettable that for the second successive year a marked decrease in the herd owner support of the mastitis control program is to be reported. This in spite of the fact that mastitis still constitutes one of the major obstacles toward an economic production of a high quality milk.

While the above mentioned services are the more important ones performed by the laboratory there have been many additional duties. For example, the distribution of starter cultures to cheese factories and the testing of milk for butterfat from herds under the Provincial Cow Testing Plans. A considerable number of samples of egg melange, egg yolks and egg whites were submitted for bacteriological analysis during the year and some time has been spent in preparing and distributing testing solutions and indicators used by the dairy industry. The laboratory has functioned on many occasions as a consulting agency on technical problems connected with dairying. Extension work through meetings and conferences of plant personnel has for many years been regarded as a regular function of the laboratory director.

DAIRY CATTLE IMPROVEMENT SERVICE

Cow Testing.

The number of cows under test increased from 1802 to 1901 during the year under review. In recent years there has been a steady increase in the number of cows under test which in 1946 was only 1145. Three testing centres were again in operation where samples were forwarded to determine the butterfat content. On the basis of herds the following were tested at each centre, Edmonton 50, Ponoka 36 and Red Deer 29.

Two plans are offered herd owners. Plan I is based on daily weighing and monthly tests while Plan II is based on a record which is computed from the weight of milk during one day each month at which time samples are lifted for butterfat tests.

The following table shows the extent to which each plan is used and the average production under each plan as well as the provincial average for all cows under test:

	1952		
	* Plan I	** Plan II	Total
No. of herds under test	58	57	115
No. of cows under test	754	1,147	1,901
Ave. No. Cows per herd	13	20.1	16.5
Herd Ave. on basis of cow years (T)			
No. of cow years	491.31	768.41	1,259.72
Ave. production of milk lbs.	9,391	8,809	9,020
Ave. production Butterfat lbs.	341.8	309.1	321.9
Average Test			3.57

* Plan I Daily weighing and monthly tests

** Plan II Computed records from one day's weighing and monthly tests

(T) The total number of cows on test during the year is used in determining the herd average, except where new cows are placed on test, or a cow is sold or dies in which case only that part of the year which she produces is used.

It will be noted that Plan II is proving more popular particularly with large herds. This plan was only introduced in 1946 and now more than half of the cows being tested are under this system.

The average milk production of cows on test shows a decrease of 198 lbs. and 12.3 lbs. of butterfat from 1951. When consideration is given to the favourable pasture season, which was extended by fine weather late into the fall, this decrease was not expected. It appears that a large number of low producing cows may have been retained in herds due to an unfavourable market for low quality beef. This condition prevailed for most of the year and from the time Canadian cattle were prevented from entering the United States early in 1952.

Individual reports were mailed to each herd owner showing the average of his herd together with the average of all cows under test. To assist him in interpreting the results of his year's testing a pictorial graph showing the production of each cow in the herd is also forwarded. This emphasizes to the herd owner that each cow is a separate "unit" and that these records should be used for culling, selection, and improved feeding and management.

The "Greater Average Butterfat" and "Herd Improvement" Competitions serve to stimulate record keeping. These competitions are based on the year's records and winners are announced annually at the Alberta Dairymen's Convention. Competition winners are determined by an analysis of all records requiring considerable time.

Graded Certificates of production were supplied for all cows producing the required standards. There were 888 Certificates issued during 1952 as compared to 740 in 1951.

The "Honour Roll" which is a list of those herds with five or more cows, whose average production exceeds 300 lbs. of butterfat, contained 20 less herds than in 1951. This decrease is partly due to a fairly large turnover of herds listed with the Service. Several herds discontinued testing, during the year, and many that replaced them were not on the service a full eight months which is one of the requirements. Some of the herds which dropped out joined the R. O. P. Service to secure records necessary for the registration of male offspring.

The Honour Roll will be sent to all herd owners on the Service along with the herd report rather than including it in the Branch Annual Report.

During the year the supervisor visited 65 of the herds under test, milk scales were checked to insure accuracy and the testing program was reviewed. In most cases an analysis of the previous year's herd report was made and where indicated, recommendations as to feeding, selection and management practices were outlined. Samples were lifted and weights checked from several of the herds expected to place in the Competition.

Co-operation with the Live Stock Branch was given in securing dairy bulls, and females placed under the "Cattle Improvement Policy" and the "Live Stock Listing Bureau." A total of 60 head was purchased under these plans during the year.

A considerable amount of extension work was carried on by the supervisor. This included radio talks, addressing meetings, field days, Junior Club Achievement Days in addition to judging at a number of fairs. Leaflets, circulars and bulletins were prepared and distributed on dairy production problems.

An attempt was made to secure some definite information on the variation between herd tests and the plant test on which payment is based. This took the form of a survey in one of the larger herds in the Edmonton district during a two week period late in the fall. Samples were lifted and tested for butterfat from each cow in the herd and from each can of milk before and after cooling. Samples of the same milk were lifted daily at the dairy plant both from individual cans and the dump tank. These tests will be averaged on a weight basis and compared with the composite test for the pay period. It is expected that a complete report will be available early in the New Year.

Estimated Average Production (All Alberta Cows)

It is difficult to secure accurate information on the average production of Alberta dairy cows due to the necessity of estimating so many factors which enter into such a calculation. However, the following table shows the estimated production of milk and butterfat based on the total number of cows kept as reported in the June survey except for 1951 and the estimated total quantity of milk produced. For 1951 the census total of 277,600 dairy cows has been used, which accounts for the big increase shown in production per cow over 1950. This will

undoubtedly be much smaller when the cow population figures are revised for the previous inter-census years. It will be noted that the test used for 1952 was 3.5% whereas in previous years it had been estimated at 3.6%. This is in keeping with the findings at dairy plants and the average test of those herds on the Cow Testing Service.

	*1952	1951	1950	1949	1948
Ave. milk production, lbs.	5,803	5,957	5,508	5,286	5,115
Ave. butterfat production, lbs.	203	214	198	190	184

* Preliminary figures.

Dairy Cattle Sales.

Several outstanding dairy herds were dispersed at public auction during the year. The Jersey herd of Fred Yeabsley, Calgary, and the Holstein herd of G. M. Gibb, Edmonton, were possibly followed with the greatest interest due to the high quality of stock offered.

Other sales of interest included, the Southern Alberta Dairy Cattle sale in Calgary, also the herds of Geo. H. Pinder, Fort Macleod; A. R. Kay, Stettler; Algar Lysing, Camrose; Stewart Smith, Clover Bar, and the late Colin Ross, St. Albert.

While cattle prices did not reach the 1951 level, fairly satisfactory prices were received considering all purchases were made by Alberta breeders and dairymen.

DAIRY COST AND FARM MANAGEMENT SERVICE

Cost studies were continued with four separate groups of fluid milk shippers. These dairy farms supply the four principal cities of Edmonton, Calgary, Lethbridge and Medicine Hat. A group of mixed farms in the Leduc - Wetaskiwin area were also studied to secure information on the relative returns from different farm enterprises as well as production costs for major farm products. The first year records for this group covered the calendar year of 1951. In order to get more accurate information additional farms have been costed during the past year.

Complete reports were prepared for each separate group. These were supplied to co-operating farmers, extension workers and those officials charged with the responsibility of price fixing. The report covering the group of mixed farms proved of considerable interest to extension workers. As further results from this particular group becomes available it is likely that the information will form the basis of discussion with many farm audiences.

A rapid check of feed and labour costs was made during the spring and again in the fall on those farms supplying fluid milk to the principal cities. These items form the greatest portion of production costs and are the most variable. Up to date information on these important items can assist greatly in meeting an urgent situation before supplies may become affected.

Due to retirements and sale of fluid milk farms close to the larger cities for industrial purposes, a larger number of farm accounts dropped out during the year than usual. Out of 98 fluid milk farms, where accounts were opened, 15 discontinued keeping records. To keep the sample representative and of sufficient size considerable time and effort is spent attempting to secure satisfactory co-operators who are interested in keeping the necessary account books.

While 51 mixed farms completed satisfactory accounts in 1951 it was realized that the number should be increased to give a sufficient size of sample for each enterprise studied. Some farms have 2 or more major enterprises and the owner is interested in an analysis of each.

The following table shows the number of enterprises studied on mixed farms in 1951 and the expected breakdown of the 1952 records presently being closed:

Year	Beef	Dairy	Hogs	Poultry	Grain	Total Enterprises	Total Farms
1951	7	14	15	8	7	51	51
1952	15	25	25	22	23	110	70

It will be noted that 110 enterprises are expected from the 70 farms being studied. By costing 2 or more enterprises on these farms additional information can be secured with little additional expense. This form of analysis appeals to the farm owner as it shows the relative importance and returns from each enterprise.

Extension work by the Supervisor and Field Economist is taking an added amount of time as requests for this type of information increase. Interest among individual farmers and farm audiences has been increased as a result of coloured slides and snapshots on such items as labour-saving devices, machinery, buildings, cropping practices, etc.

FROZEN FOOD LOCKER PLANT INSPECTION SERVICE

The administration of the Frozen Food Locker Act, including the inspection and instruction service to this comparatively new industry, is carried out by the ten regular dairy inspectors under the direction of a Supervisor with special training and experience in this field.

A total of 916 inspections, which represents an increase of 103 over 1951, were made during the year under review. The principal items checked and assistance given to locker plant operators by inspectors include the maintenance of uniform low temperatures, the sanitation of equipment and methods of handling food products, the proper material for packaging or wrapping food for freezing and storing, the approved markings for ease of identification and the most complete system of records for patron satisfaction.

The Dairy Branch gives considerable assistance to new plants under construction and also to plants which are remodelled or reinsulated. Plans are checked carefully and vapour barriers inspected before the construction work is completed. A blue print is provided for the benefit of contractors which shows in detail the proper method of constructing, insulating and installing a vapour barrier for a low temperature room.

During the year instruction cards and circulars have been prepared and distributed to all plants with a view of improving the products and service being offered by these plants. Extension work through meetings, radio and publications have been continued by officials of the Dairy Branch.

A special duty of the inspectors has been to score all plants for the Merit Award Competition. Top scoring plants in each district are rescored by officials from the Edmonton office and the winners are announced at the Annual Convention of the Alberta Quick-Freeze Locker Association. A copy of the score card showing the score for each individual plant in comparison to the winning plant is sent to operators concerned. This report is used as a guide in planning future improvements to many plants. At the 1952 Convention it was announced that Hanna's Frozen Foods, Calgary was the winner of Section A, plants with 400 lockers and over; while the Athabasca Cold Storage Lockers, Athabasca won Section B for plants less than 400 lockers.

A new service of processing and freezing foods for storing in home freezers was developed by a number of plants during the year. As this food was not stored in locker plants it has not been included in the totals quoted below. Provision has been made in the new monthly report form, which will be used in 1953, to record all such products with the hope that this information will be of assistance in guiding future operations of the industry.

As a result of a request from the Dominion Bureau of Statistics, for information on the numbers and weights of farm animals slaughtered outside of the packing plants, a special questionnaire has been prepared and will be used by inspectors in attempting to secure this information from locker plant operators during 1953.

The following statistical data has been tabulated from information secured from the monthly reports received from all plants throughout the year ending

November 30th, 1952. For sake of comparison similar information for the previous year has been included. It will be noted that 2 new plants were put into operation during the year. These plants are located at Strome and Ranfurly and bring the total to 148 plants in operation at the end of 1952. A total of 16,795,135 lbs. of food were processed, frozen and stored in the 48,617 lockers rented. This represents an increase of almost three million pounds of food over the previous year.

	1951		1952	
	Pounds	Percent	Pounds	Percent
Fresh Meats	10,253,713	74.0	12,623,325	75.2
Fish	131,289	1.0	135,250	.8
Poultry	1,064,800	7.7	1,133,480	6.7
Game Birds	85,693	.6	100,251	.6
Big Game	117,677	.8	180,785	1.1
Cured Meats	1,486,556	10.7	1,773,918	10.6
Lard Rendered	163,576	1.2	204,656	1.2
Fruits	188,639	1.4	208,391	1.2
Vegetables.....	249,018	1.8	308,988	1.8
Miscellaneous	<u>118,936</u>	<u>.8</u>	<u>126,091</u>	<u>.8</u>
Total	13,859,897	100.0	16,795,135	100.0

	1951	1952
Number of plants reporting	146	148
Number of lockers installed	50,316	51,617
Average number of lockers installed	345	349
Number of lockers rented, December 1st	45,757	48,617
Percentage of lockers rented, December 1st	90.9	94.2
Average lbs. food stored per locker,	315.1	358.8
with complete service		
Average lbs. food stored per locker,	190.3	215.2
without complete service		
Average poundage per locker, all plants	302.9	345.5
Average lbs. per locker on the basis of	312.2	353.3
lockers rented for 12 months		
Inspections during the year	813	916

DEPARTMENT OF AGRICULTURE

ALBERTA DAIRY STATISTICS

Supplement to Annual Report

MILK PRODUCTION AND UTILIZATION

Year	Total Milk Production in Million lbs.	Creamery Butter	Dairy Butter	Factory and Home Made Cheese	Miscellaneous Factory Products	Milk and Cream Consumed	Fed Farm Animals
1920	784	35.9	27.8	.6	.9	34.8*	
1925	923	50.6	24.5	1.7	.5	22.7*	
1930	1,077	38.5	25.8	1.2	.9	25.1	8.5
1935	1,384	39.1	22.0	1.3	.4	25.6	11.6
1940	1,671	41.8	21.0	2.0	1.5	24.9	8.8
1945	1,731	46.9	12.1	2.7	2.8	26.7	8.8
1950	1,695	43.2	9.6	1.9	3.7	28.4	13.2
1951	1,654	41.0	8.6	1.4	4.1	30.9	14.0
1952 Prel.	1,625	39.9	7.4	1.4	4.8	31.9	14.6

* Includes Milk otherwise used.

FARM VALUE OF MILK PRODUCTION

1943	.....	\$ 29,366,000
1944	.....	32,437,000
1945	.....	31,541,000
1946	.....	33,159,000
1947	.....	39,102,000
1948	.....	47,886,000
1949	.....	43,244,000
1950	.....	42,402,000
1951	.....	47,308,000
1952 Preliminary	.....	45,655,000

VALUE OF FACTORY DAIRY PRODUCTS

Year	Creamery Butter ,000	Factory Cheese ,000	Ice Cream ,000	Fluid Milk and Cream ,000	Skim milk, Buttermilk and Whey ,000	Miscellaneous manufactured products ,000	Total ,000
1943	\$ 12,444	\$ 641	\$ 1,261	\$ 7,501	\$ 296	\$ 1,086	\$ 23,229
1944	12,207	1,085	1,371	7,714	309	1,146	23,832
1945	11,390	1,131	1,250	7,813	320	1,170	23,074
1946	11,440	979	1,254	8,980	297	1,138	24,088
1947	16,407	1,018	2,232	10,113	506	1,380	31,656
1948	21,245	1,010	2,534	12,094	86	1,925	38,894
1949	18,580	1,011	2,769	12,537	90	1,878	36,865
1950	16,809	1,113	2,813	13,930	224	1,764	36,653
1951	17,767	909	3,311	15,878	240	2,187	40,292
1952 Prel.	16,250	839	3,600	17,808	413	2,641	41,551

CREAMERY BUTTER PRODUCTION

Year	Creameries	Pounds Butter	Av. Output Per Creamery	Selling Value Total	Cents per lb.
1906	42	1,960,356	46,675	\$ 415,800	(21.21)
1910	60	2,238,078	37,301	575,000	(25.69)
1915	57	7,544,148	132,353	2,021,448	(26.79)
1920	53	11,821,291	223,043	6,555,509	(55.45)
1925	99	19,630,101	198,284	6,959,059	(35.45)
1930	92	17,716,744	192,573	4,968,227	(28.04)
1935	97	23,094,707	238,090	4,588,917	(19.90)
1940	95	29,796,520	313,647	6,647,604	(22.31)
1945	91	34,692,917	381,241	11,389,875	(32.83)
1950	92	31,238,000	339,543	16,809,000	(53.81)
1951	92	28,960,000	314,783	17,767,000	(61.35)
1952 Prel.	92	27,660,000	300,652	16,250,000	(58.75)

CHEDDAR CHEESE PRODUCTION

Year	Factories	Pounds Cheese	Av. Output Per Factory	Selling Value Total	Cents per lb.
1906	7	97,739	13,963	\$ 13,000	(13.30)
1910	11	220,000	20,000	27,500	(12.50)
1915	13	381,832	29,372	68,441	(17.93)
1920	7	398,750	56,964	110,355	(27.70)
1925	14	1,473,835	105,274	306,604	(20.80)
1930	8	1,035,352	129,419	175,392	(16.94)
1935	11	1,364,526	124,048	168,280	(12.33)
1940	18	2,705,853	150,325	385,584	(14.25)
1945	18	3,985,160	221,398	903,309	(22.67)
1950	14	2,940,000	209,975	1,030,000	(35.05)
1951	10	2,080,000	208,000	831,000	(39.93)
1952 Prel.	10	2,022,000	202,200	672,000	(33.25)

ICE CREAM PRODUCTION AND VALUE

Year	Quantity in Gallons	Price Per Gallon	Value
1928	652,345	\$ 1.20	\$ 782,814
1930	637,196	1.21	768,225
1940	664,703	1.08	720,000
1945	1,072,000	1.20	1,284,000
1950	1,967,000	1.43	2,813,000
1951	2,109,000	1.57	3,311,000
1952 Prel.	2,293,000	1.57	3,600,000

TOTAL VALUE OF DAIRY PRODUCTS

Year	
1900	\$ 546,476
1906	2,000,000
1910	7,855,761
1915	15,896,586
1920	34,000,000
1925	23,002,000
1930	18,675,500
1935	14,252,500
1940	19,532,344
1945	34,588,305
1950	51,797,000
1951	57,310,000
1952 Prel.	56,884,000

GRADES OF CREAM IN PERCENTAGE RECEIVED AT CREAMERIES

Year	Table Grade	Special Grade	First Grade	Second Grade	Off Grade	Total lbs. Butterfat
1922	2.3	32.4	37.3	27.2	.8	10,185,277*
1925	1.7	39.0	47.1	12.0	.2	14,019,009*
1930	3.2	43.9	45.9	6.6	.4	15,187,266
1935	2.9	61.3	31.3	4.3	.2	19,561,318
1940	3.0	66.4	28.0	2.4	.2	25,347,571
1945	1.0	54.2	39.9	4.7	.2	29,286,577
1950	1.1	56.3	39.4	2.9	.3	27,119,080
1951	1.0	55.4	41.0	2.5	.1	25,292,232
1952	.9	52.9	43.7	2.3	.2	24,093,626

* Quantity graded by Provincial Cream graders only,
service commenced May 8, 1922.

GRADES OF CREAMERY BUTTER

Since May 1st, 1927, the grading of Creamery Butter has been a function of the Federal Department of Agriculture

Year	Total lbs. Graded	Percentage in Each Grade				% 93 Score and over
		First	Second	Third	B. T. G.	
1927	3,278,327	68.8	24.0	7.2	-	--
1930	5,679,520	68.7	20.0	11.3	-	--
1935	19,081,270	83.0	10.5	6.0	.5	--
1940	27,243,216	88.1	7.1	4.4	.4	(55.8)
1945	31,771,600	88.6	5.7	5.4	.3	(45.1)
1950	30,561,496	93.3	5.3	1.0	.4	(41.0)
1951	28,035,392	94.4	4.2	1.2	.2	(45.6)
1952	26,332,320	95.4	3.3	1.2	.2	(42.8)

GRADES OF CHEDDAR CHEESE

Year	Total lbs. Graded	Percentage in Each Grade				% 93 Score and over
		First	Second	Third	B. T. G.	
1938	1,531,530	57.8	41.3	.7	.2	(18.7)
1940	1,935,750	70.6	28.4	.9	.1	(23.0)
1945	3,869,325	82.0	17.6	.3	.1	(33.3)
1950	3,118,080	84.9	13.6	1.3	.2	(30.3)
1951	2,115,144	87.4	11.9	.7	.0	(33.9)
1952	1,985,949	90.4	8.7	.4	.5	(30.0)

SPECIAL GRADE BUTTERFAT PRICES
(F.O.B. Shipping point)

	1952		1951		1950		1949	
	Cents	%	Cents	%	Cents	%	Cents	%
January	68.65 (4.0)		58.3 (4.4)		61.7 (4.9)		70.2 (4.6)	
February	68.35 (4.5)		60.8 (4.8)		61.7 (5.3)		70.2 (4.6)	
March	66.95 (5.4)		77.05 (5.6)		60.1 (5.7)		63.9 (5.3)	
April	62.85 (7.6)		62.3 (7.5)		57.4 (7.2)		59.45 (6.6)	
May	58.15 (11.7)		63.3 (10.9)		53.7 (9.7)		59.2 (10.0)	
June	58.15 (14.6)		63.3 (14.6)		52.7 (13.8)		59.2 (13.4)	
July	58.15 (14.1)		65.0 (14.5)		53.7 (14.6)		59.2 (13.8)	
August	58.15 (12.3)		65.3 (12.9)		53.7 (12.7)		59.2 (12.9)	
September	59.25 (9.7)		65.3 (10.2)		54.3 (9.5)		60.2 (10.4)	
October	63.25 (7.0)		65.3 (6.3)		56.9 (7.4)		60.2 (7.7)	
November	64.15 (4.9)		66.8 (4.5)		56.9 (5.0)		61.2 (6.0)	
December	64.15 (4.2)		67.3 (3.8)		57.7 (4.2)		61.2 (4.7)	
The Year	61.45 (100.0)		64.7 (100.0)		55.9 (100.0)		61.24(100.0)	

NOTE: The figures enclosed in brackets represent the monthly percentages of the cream receipts for the year.

MILK COW NUMBERS AND AVERAGE PRODUCTION

Year	No. Cows June 1st	Average Milk Pounds	Production Butterfat Pounds
1920	285,900	2,744	98.7
1925	391,100	2,957	106.5
1930	351,600	3,118	112.2
1935	453,800	3,125	112.5
1940	370,600	4,400	158.4
1945	376,400	4,596	165.5
1950	307,800	5,508	198.3
1951 Revised	277,600	5,957	214.5
1952	280,000	5,803	203.1*

* Average butterfat test of 3.5% used in 1952 and 3.6% in previous years.

STATISTICAL DATA RELATING TO MILK CONTROL
Submitted by The
BOARD OF PUBLIC UTILITY COMMISSIONERS
(A. T. Neare, Administrator of Milk Control)

The tables which follow relate to milk and cream supplied and sold for fluid consumption in the areas of the Province controlled by the Board of Public Utility Commissioners during the year 1952.

TABLE 1
PER CAPITA CONSUMPTION OF FLUID MILK, IN PINTS, MONTHLY FOR 1952
(To Include Cream Consumption Converted to Milk Equivalent)

Area	PINTS (PER DIEM)											
	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Calgary	.837	.876	.898	.906	.895	.909	.875	.868	.876	.924	.893	.879
Camrose	.940	1.01	1.00	1.00	1.20	.980	.940	.990	1.00	1.10	1.11	1.07
Crow's Nest Pass	.550	.575	.570	.580	.595	.575	.545	.530	.530	.550	.550	.575
Edmonton	.830	.960	.970	.990	1.00	.960	.910	.920	.980	1.00	1.10	1.03
Lethbridge	.780	.830	.835	.810	.830	.810	.775	.807	.825	.850	.850	.840
Medicine Hat	.745	.775	.770	.755	.745	.755	.740	.745	.765	.785	.795	.790
Ponoka	.910	.930	.930	.920	.870	.930	.830	.790	.840	.900	.960	.923
Red Deer	.940	.980	.960	.980	.970	.990	1.00	1.00	1.04	1.07	1.04	1.02

TABLE 2
CONSUMPTION OF FLUID MILK MONTHLY, 1952 - IN QUARTS

Area	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Calgary	1324776	1304861	1423221	1394793	1416407	1369413	1357315	1374506	1344164	1469275	1416798	1375437
Camrose	53755	53052	56582	54613	58377	52795	51799	54365	56834	59868	58333	58125
Crow's Nest Pass	72046	68599	72903	70879	71121	66685	66311	67716	67811	71226	68348	70216
Edmonton	1726940	1695736	1820472	1835371	1883487	1711642	1677309	1716849	1792200	1912306	1853758	1804390
Lethbridge	205175	201341	218782	208939	219438	202110	201964	211603	211349	223058	214443	217163
Medicine Hat	124734	121966	129115	124411	127958	123081	124604	127855	126457	133592	129767	131405
Ponoka	24476	24743	26530	25074	25027	24895	22905	22283	23435	25519	24903	24800
Red Deer	78952	76005	81088	78855	80997	78820	82282	82012	83745	87981	84810	82600

TABLE 3
CONSUMPTION OF FLUID CREAM MONTHLY, 1952 - IN QUARTS

AREA	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Calgary	122387	119603	127352	122826	125421	126584	129089	122015	121222	129940	127038	129600
Camrose	1859	2055	2132	2007	2004	2071	2081	2285	2259	2545	2610	2542
Crow's Nest Pass	47	238	240	291	728	670	400	37	--	105	218	252
Edmonton	150590	149120	163644	153695	162772	157664	155107	158325	162767	175041	175459	171521
Lethbridge	19496	19440	20912	18937	20161	19928	19682	20290	19732	21570	20999	22296
Medicine Hat	8173	8013	8414	7597	7448	7248	7783	7302	7568	8232	8346	8793
Ponoka	1699	1482	1572	1533	1446	1607	1495	1340	1364	1556	1741	1705
Red Deer	2784	3959	4422	4234	4667	4773	4808	4910	4857	5383	5095	5200

TABLE 5
CONSUMPTION OF BUTTERMILK MONTHLY - 1952 - IN QUARTS

AREA	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
Calgary	14341	14380	16801	18632	20066	19769	22557	22709	18534	18045	16051	15898
Camrose					NO BUTTERMILK SOLD							
Crow's Nest Pass					NO BUTTERMILK SOLD							
Edmonton	16274	20297	25182	33211	37760	28143	36153	37473	25910	24835	21100	19270
Lethbridge	1861	2061	2511	3065	3649	3483	3590	3707	2773	2600	2280	2201
Medicine Hat	632	766	954	1144	1316	1297	1445	1557	1003	963	773	728
Ponoka					NO BUTTERMILK SOLD							
Red Deer	658	784	832	1020	1385	1095	1264	1314	835	870	711	732

TABLE 6
FLUID MILK CONSUMPTION, 1948 TO 1952 - IN QUARTS

AREA	1948	1949	1950	1951	1952
Calgary	1 391 0727	1 460 2149	1 537 2709	1 601 8856	1 657 0966
Camrose	498 817	547 698	565 449	586 347	668 498
Crow's Nest Pass	741 929	729 359	813 662	895 307	833 861
Edmonton	1 728 7723	1 874 0153	1 958 9606	2 044 0719	2 143 0460
Lethbridge	235 7966	244 4563	255 5025	265 0310	253 5365
Medicine Hat	1 771 824	1 568 148	1 550 809	1 547 050	1 524 945
Ponoka	248 739	257 290	266 587	286 041	294 590
Red Deer	772 833	820 462	839 336	904 838	978 147
TOTALS	3 759 0558	3 970 9822	4 155 3183	4 332 9468	4 483 6832

TABLE 7
FLUID CREAM CONSUMPTION - 1948 - 1952 - IN QUARTS

AREA	1948	1949	1950	1951	1952
Calgary	1417539	1380214	1432364	1470094	1503087
Camrose	20433	22929	20509	20552	26450
Crow's Nest Pass	1573	2616	4529	3570	3226
Edmonton	1537893	1640743	1696727	1771249	1935705
Lethbridge	191806	207576	228306	240212	243443
Medicine Hat	95788	92358	90634	85605	94917
Ponoka	13555	15214	15161	16324	18540
Red Deer	37719	30866	31208	34213	55092
TOTALS IN QUARTS	3316306	3392516	3519438	3641819	3880460
TOTALS in B.F. Equivalent lbs.	995161	1028445	1077533	1133662	1217004

TABLE 8
FLUID MILK PURCHASES BY DISTRIBUTING PLANTS, 1948 TO 1952 - IN POUNDS

AREA	1948	1949	1950	1951	1952
Calgary	44746741	48277972	50296562	51916291	55433013
Camrose	1326321	1555293	1742920	1548501	1622121
Crow's Nest Pass	1393870	1166023	1386516	1344199	1395031
Edmonton	52369056	54684765	58260599	61682711	65917608
Lethbridge	6624628	6730570	7077846	7373642	7458317
Medicine Hat	4533004	4760167	4674066	5015290	5166825
Ponoka	699398	790910	870160	902509	939168
Red Deer	3195454	3333969	3373296	3453816	3401015
TOTALS (lbs.)	114948462	121296669	127681965	133236959	141333098

TABLE 9
SUMMARY OF MILK AND CREAM PRODUCERS AND DISTRIBUTORS OPERATING
ON DECEMBER 31st, 1952, UNDER BOARD OF PUBLIC UTILITY
COMMISSIONERS LICENSE

AREA	MILK		CREAM		TOTAL	
	Producers	Distributors	Producers	Distributors	Producers	Distributors
Bowden	1	1	-	-	1	1
Calgary	234	5	25	1	259	6
Camrose	7	2	-	-	7	2
Crow's Nest Pass	12	1	-	-	12	1
Edmonton	443	5	23	-	466	5
Lethbridge	35	2	-	-	35	2
Medicine Hat	40	2	-	-	40	2
Ponoka	5	1	-	-	5	1
Red Deer	14	2	5	-	19	2
TOTALS	791	21	53	1	844	22

TABLE 10
MILK AND CREAM PRICES AS EFFECTIVE DECEMBER 31st, 1952

MILK			CREAM			MILK PRODUCTS		
To Pro- ducers per 100 lbs. 3.5% B.F.	To Con- sumers Per Quart		10% Sub- standard Per Pint	18% Table Per Pint	32-34% Whipping Per half Pint	Chocolate Milk Per Quart	Buttermilk Per Quart	
\$	¢		¢	¢	¢	¢	¢	
Area								
Bowden	4.56	19	--	--	27	--	--	
Calgary	4.84	21	23	--	30	22	20	
Camrose	4.43	18	21	36	28	20	17	
Crow's Nest Pass	5.45	23	23	--	--	24	--	
Edmonton	4.84	20	23	38	29	21	19	
Lethbridge	4.84	21	23	--	30	22	20	
Medicine Hat	4.84	21	23	--	30	22	20	
Ponoka	4.43	18	--	36	28	20	17	
Red Deer	4.95	20	23	40	30	22	20	

REPORT OF THE POULTRY BRANCH

Acting Poultry Commissioner	F. J. Higginson	
Inspectors:	E. R. Nicholls	Calgary
	E. E. Kitchen	Red Deer
	J. Raffa	Edmonton
	A. O. Mickelson	Edmonton
Manager, Provincial Poultry Plant	W. E. Hughes	

GENERAL REVIEW

The fluctuating market prices in effect for poultry products over a greater part of 1952 have not been conducive to the stability of the poultry industry, nor any encouragement to producers to extend their operations. Among producers, the general consensus of opinion is that the support price is far too low and tends to protect the wholesalers rather than the producers.

With the steady industrial development taking place within this province, and the ever increasing population, the demand for fresh eggs far exceeded the supply available at various seasons of the year, with the result storage stocks were used and completely exhausted to meet domestic requirements. The average price paid to producers this year was considerably lower than last year.

New markets for Alberta eggs are being opened up and developed. Large trial shipments made to various points south of the border indicate great possibilities for future trading in this direction. In addition, the movement of eggs to Alaska and points north is steadily increasing. With large supplies of feed grain available this season at slightly lower prices, and as feed costs constitute the largest single item in production of eggs and poultry meat, it would appear the spread between production costs and market prices could be increased.

EGG AND CHICK PRODUCTION

Considerable increase was shown in egg production this year with the quality continuing very high. Flock owners are conscious of the necessity of efficiently producing a quality product if they are to continue in business and are, generally speaking, following the recommended practices of good poultry husbandry. Chick production was slightly lower than in 1951, showing a decrease of 2%. 7,583,531 chicks were hatched in Alberta and 487,710 were imported from other provinces, making a total of 8,071,241 chicks for the year. Many hatcheries over estimated the possible demand and overset last season resulting in large surpluses of chicks available at greatly reduced prices, which for a time had a demoralizing effect on the industry. Some hatcheries are still catering to the demand for chicks for broiler trade and are operating the entire season. The keeping of all pullet flocks is fast becoming a regular practice among poultry producers and is strongly recommended, especially from the standpoint of efficient production and disease control.

TURKEYS

Turkey production this season was the highest in the history of the Province, showing an increase of 70% in the number of poults sold. Turkey marketings also reached an all time high record of 167 carloads, containing 4,206,961 pounds, which were exported mostly to Eastern Canada, and a further 1,500,000 pounds sold for local consumption. Again it was necessary to import large numbers of eggs and poults to meet the demand. This is an unfortunate situation as thousands of dollars are being sent out of Alberta annually to purchase what should be produced here. Every possible effort is being made to make turkey producers conscious of this situation.

Prices were considerably lower than last year, but remained fairly steady through the entire marketing period.

The number of specialized turkey breeding farms established in the province is steadily increasing and it is hoped that in the near future Alberta can be-

come self-sufficient in the production of turkey hatching eggs.

DRESSED POULTRY

In spite of the heavy production and marketing of turkeys, storage stocks are not excessive at the present time. There is, however, a shortage of fowl and chicken with some carload lots being imported to meet the demand. Storage stocks have been practically all disposed of.

Provincial dressed poultry regulations, requiring that all dressed poultry offered for sale must be graded and sold according to the grade, became effective on April 1, 1952. These regulations effected only the five principal cities: Edmonton, Calgary, Lethbridge, Medicine Hat and Red Deer. They have been well received and are quite satisfactory.

TURKEY APPROVAL AND BANDING POLICY

The turkey approval and banding policy continues the same as in previous years except for one important change. Due to the fact the incidence of pullorum disease in turkey flocks in all the western provinces has been practically nil for many years, testing for this disease was discontinued this season as it was felt both the time and money necessary for this work could be used to a greater advantage in some other field of disease control. Last season 62 breeding flocks of turkeys were approved containing 12,587 birds. Final figures for the 1952-53 season are not complete at this time. Indications, however, point to a substantial increase both in flocks and number of birds approved.

POULTRY APPROVAL AND BANDING POLICY

In order to avoid the necessity of importing hatching eggs, and at the request of the Alberta hatcherymen, every effort was made to promote and approve a sufficient number of flocks in this province to supply the entire demand for hatching eggs. Last season showed a substantial increase of 127 flocks.

The controlled poultry breeding program instituted last season by one of the large Alberta hatcheries is being continued. The development of this program is limited owing to the short supply of pedigree chicks available annually. The R. O. P. group unit in New Hampshire is also continuing and expanding. Both of these important programs should prove very beneficial to the industry.

STAFF ACTIVITIES

Twenty inspectors were kept very busy during the fall and winter months supervising the Provincial Poultry and Turkey Approval programs under which over 1,100 flocks, containing approximately 320,000 birds, are inspected, banded, and blood tested annually. Four of these inspectors are permanent members of the Poultry Branch staff. The others are employed on a temporary basis during this busy season.

Flock reinspections, service calls, culling and caponizing demonstrations, meetings, short courses, etc., provide a full itinerary for the Poultry Branch staff. Assistance was also given to the District Agriculturists in organizing and supervising the ten junior poultry clubs which were active this year. Six of these are turkey clubs and four are capon clubs. Seven very successful achievement days were held, all of which were well attended and supported. Parents are showing a great interest in these junior poultry clubs and an increase in number and membership is anticipated. For the second time, a junior poultry judging team was sent to the Toronto Royal Winter Fair and was successful in placing third in this great Dominion contest. Staff members have spent considerable time in assisting the District Agriculturists in coaching these young people.

ROYAL WINTER FAIR

The Alberta poultry exhibit at the Royal Winter Fair this season although small in numbers was high in quality.

Winnings - Live Birds

Mr. Gilbert Young, DeWinton - R. C. White Leghorns - 1st cockerel; 1st pullet; 1st young trio; 2nd hen.

Mr. R. Adams, Edmonton - S. C. Rhode Island Reds - 2nd and 4th hen; 3rd pullet; 5th cock.

Winnings - Dressed and Eviscerated Birds

Mr. B. O. Brown, Acme

Young Turkeys - Undrawn

Toms, Box of 4, Frozen, Grade A 3rd

Young Turkeys - Eviscerated

Single Hen, Frozen, Grade Special 4th

Single Tom, Frozen, Grade Special 1st

Box of 4 Hens, Frozen, Grade A 4th

Box of 4 Toms, Frozen, Grade A 1st

Mr. Harry Sahlen, Calgary

Young Turkeys - Undrawn

Toms, Box of 4, Frozen, Grade A 1st

Young Turkeys - Eviscerated

Single Tom, Frozen, Grade Special 2nd

Mr. B. O. Brown, Acme, also brought honour to the province by winning Grand Championship for the best dressed turkey in the show.

PROVINCIAL POULTRY PLANT

The Provincial Poultry Plant at Oliver consisting of fifty-three acres is operated as a practical poultry breeding and demonstration establishment. The flock at the present time consists of 880 R.O.P. S.C. White Leghorns and 790 R. O. P. New Hampshires, making a total of 1,670 birds. In addition, 150 Bronze turkeys are also kept.

The R.O.P. entry continues to be one of the largest in Canada with 600 pullets consisting of 300 New Hampshires and 300 S. C. White Leghorns on trap at the present time. 85% of last year's Leghorn entry certified with an average production, over a ten month period, of 200 eggs per bird, weighing 25.5 ounces to the dozen. Careful selection has also increased the size, the average weight being 4.8 pounds per bird. Out of the seven males entered under the progeny test program, seven qualified, and out of the fifty-three females entered under the progeny test program, forty-three qualified. The average age at first egg for these birds was 175 days. In the New Hampshire entry 84% certified with an average production, over a ten month period, of 184 eggs per bird, weighing 25.6 ounces to the dozen, and with an average body weight of 5.9 pounds. The average age of these birds at first egg was 174 days.

Consistent with the popular demand and present market requirements the original program of turkey selection for a medium size bird is being continued. Efforts along this line are limited due to the small flock available. However, this season after selecting 150 of the best birds for breeding purposes for the 1953 season the average size of the culled birds marketed was 21 pounds for toms and 13 pounds for hens. These birds graded 75% Grade A.

Several experiments in the confinement rearing of turkeys were undertaken over a period of years, and while this method has some merit in the way of disease control and protection against predatory animals, it is an expensive and not too satisfactory way of rearing turkeys in Alberta.

TOTAL NUMBER OF WHOLESALE POULTRY PREMISES
OPERATING IN ALBERTA

Year	Fully Registered	Tentative Registration	Total Operating
1944	---	--	160
1945	---	--	188
1946	177	12	189
1947	168	17	185
1948	167	3	170
1949	163	3	166
1950	167	--	167
1951	165	--	165
1952	157	--	157

PROVINCIAL POULTRY PLANT R.O.P. 1951-52 ENTRY

	S. C. White Leghorns (16th Year)	New Hampshires (2nd Year)
Birds Entered	393	299
Birds Certified	336 - 85%	252 - 84%
* Average Production	200 eggs	184 eggs
Average Egg Weight	25.5 ounces	25.6 ounces
Average Body Weight	4.8 pounds	5.9 pounds
Dead and Culled	7%	5%
Progeny Test		
Males Passed	7 out of 7	3 out of 4
Females Passed	43 out of 53	22 out of 30

* Trapping period was 305 days

SUMMARIZATION OF HATCHING AND SALES OF STOCKS

Hatched:	S. C. White Leghorns	New Hampshires
Pedigree Chicks	9396	2251
Female Chicks		1102
R.O.P. Chicks		2055
	9396	5408
Turkey Poults	476	
Sold:		
Pedigree Cockerel Chicks	629	225
Pedigree Pullet Chicks	1948	
Female Chicks		200
R.O.P. Sired Cockerel Chicks		750
	2577	1175
Mature Males	137	132
Mature Females	1033	124
	1170	256
Hatching Eggs	1800 doz.	1860 doz.

TABLE 1

Year	Method of Testing	No. of Flocks	No. of Birds	% Reaction
1930-31	Tube Agglutination	148	18,608	20.2
1931-32	" "	232	31,177	12.9
1932-33	" "	188	26,381	8.6
1933-34	" "	205	33,295	7.3
1934-35	" "	645	104,858	11.2
1935-36	" "	615	94,536	5.5
1936-37	" "	815	136,228	5.5
1937-38	" "	677	108,908	4.8
1938-39	" "	534	92,355	4.51
1939-40	Whole Blood	437	80,927	5.1
1940-41	" "	412	91,868	2.6
1941-42	" "	510	120,198	2.12
1942-43	" "	460	120,841	0.35
1943-44	" "	664	165,903	0.716
1944-45	" "	694	198,877	0.736
1945-46	" "	632	186,992	0.798
1946-47	" "	792	248,666	0.526
1947-48	" "	862	276,716	0.645
1948-49	" "	708	231,255	0.234
1949-50	" "	826	255,561	.193
1950-51	" "	930	291,660	.189
1951-52	" "	1057	294,320	.261

Note: The above reaction is on the first test. Some provinces show a lower reaction, but these are on the final tests where over 2% reaction required a second and sometimes third and fourth retests.

DEVELOPMENT OF HATCHERIES AND CHICK SALES SINCE 1936

Year	Egg Setting Capacity	% of 1936	Chicks Hatched	% of 1936
1936	924,300	---	1,028,881	---
1937	1,036,526	112.1	1,068,056	103.8
1938	1,033,906	111.9	1,171,082	113.8
1939	1,052,759	113.9	1,394,194	135.5
1940	1,203,368	130.2	1,538,597	149.7
1941	1,269,117	137.3	1,939,052	188.4
1942	1,407,280	151.2	2,631,468	255.8
1943	1,408,070	152.3	3,607,372	250.6
1944	2,102,434	223.1	5,476,476	532.3
1945	2,208,938	238.9	4,917,366	477.9
1946	2,445,750	264.6	5,711,423	555.1
1947	3,404,773	390.0	7,452,785	724.3
1948	3,638,704	393.7	6,265,620	608.9
1949	3,736,510	404.2	6,595,620	641.0
1950	3,862,436	417.9	5,940,992	577.4
1951	3,601,633	389.5	7,685,478	746.9
1952	3,900,055	421.9	7,484,064	727.4

PRODUCTION OF CHICKS

	1951	1952
Breeder Hatcheries operating in Alberta	8	9
Commercial Hatcheries operating in Alberta	<u>55</u>	<u>55</u>
	63	64
Chicks Hatched in Breeder Hatcheries	61,477	161,060
Chicks Hatched in Commercial Hatcheries	<u>7,624,001</u>	<u>7,323,004</u>
	7,685,478	7,484,064

Decrease in Chicks Production over 1951 - 2.6%

HATCHABILITY

	1951	1952
All Approved Hatcheries (Average)	67.8%	66.8%

CHICK PRODUCTION BY BREED - 1952

S. C. White Leghorns	1,547,949
New Hampshires	1,832,305
Barred Plymouth Rocks	579,609
Rhode Island Reds	30,864
White Rocks	503,191
White Wyandottes	553
Light Sussex	1,418,429
Crosses	1,362,807
Miscellaneous	79,983

ANALYSIS OF CHICKS SALES

	1951	1952
Chicks Hatched	7,685,478	7,484,064
Chicks Not Sold	205,396	453,816
Chicks Exported	176,333	232,321
Chicks Imported	839,026	487,710
Chicks Remaining in Province	8,142,975	7,285,637

POULT PRODUCTION BY BREED - 1952

Bronze	473,420
Beltsville Whites	16,797
White Hollands	3,313
Jersey Buffs	170
Bourbon Reds	135
Miscellaneous	34,058

ANALYSIS OF POULT SALES - 1952

Poults Hatched	527,893
Poults Exported	11,116
Poults Imported	175,939
Poults Remaining in Province	692,716

REPORT OF AGRICULTURAL EXTENSION SERVICE

F. H. Newcombe	Director, Extension Service
S. S. Graham	Supervisor of District Agriculturists
Mrs. V. G. MacDonald	Supervisor, Women's Extension
Miss B. J. Lewis	Extension Nutritionist
Miss C. Judson	Extension Home Designer
C. A. Cheshire	Extension Engineer
E. B. Swindiehurst	Extension Editor
R. E. English	Statistician
T. Kilduff	Research Extension Officer
C. J. McAndrews	Extension Irrigator

STAFF

There were no changes in headquarters staff during the past year. Changes in other staff will be reported in the appropriate sections.

AGRICULTURAL SOCIETIES

The Societies themselves appear to feel that they had a successful and reasonably prosperous season. The events which they held have been well patronized by the public. The impact of these events on the agricultural life of the province is an intangible thing and very difficult to estimate.

The only new Society chartered during the year was at Fairview and is, in effect, the revival of the old Waterhole Agricultural Society which was disorganized by Ministerial Order in April 1951. The only Society disorganized during the year was the one at Didsbury.

For purposes of record, therefore, the complete list of Agricultural Societies as of this date is as follows:

- Conducted "B" Class Fairs - Camrose, Lethbridge, Lloydminster, Red Deer, Vegreville, Vermillion.
- Conducted "C" Class Fairs - Athabasca, Battle River, Benalto, Cardston, Donnelly-Falher-Girouville, Goose Creek, Grand Centre, Grande Prairie, Lamont, Lousana, Medicine Hat, Olds, Pincher Creek, Priddis-Millarville, St. Paul, Westlock, Wetaskiwin, Wildwood, Willingdon.
- Not Conducting Fairs - Alix, Barrhead, Drumheller, Edmonton and District, Fairview, Hanna, High Prairie, High River, Lacombe, Nanton, Okotoks, Plamondon, Rimbey, Rocky Mountain House, Ryley, Smoky Lake, Spirit River, Stettler.

Interest in activities other than fairs shows evidence of increase, even though this is not directly reflected by the record of events held. Societies in general tend to give rather more consideration to the value of activities to agriculture and this phase is being definitely studied. The activities other than fairs held this year are listed hereunder:

Tillage Competitions	12
Livestock Sales	2
Seed Fairs	4
Horticultural Exhibitions	1
Farm and Home Improvement Competitions	3
Junior Club Display Competitions	2

FARM LABOUR

General

The farm labour situation has been about the same as last year, notwithstanding the extensive requirements for construction and industrial developments in the province. An appreciable number of young men from farms have proceeded to this type of employment. It would appear that the fathers and farm operators in these cases have simply tightened their belts and adjusted their programs to

meet the situation.

Large numbers of experienced farm workers and farm domestics could have been placed but these were not available and probably it must be admitted that the average farmer is not very happy about the type of immigrant help which has been provided. Farm domestics simply do not exist in Alberta except a few daughters of immigrant families, more especially in sugar beet areas.

Co-operation of this Department with the Federal Department of Labour continues under the Farm Labour Agreement. It is a pleasure to report satisfactory relationships.

Seasonal Movements

(a) Ontario Farm Workers

The response to the demand for this movement was rather better than expected in view of the availability of industrial employment. A total of 203 men went forward.

(b) Prairie Farm Workers

Congratulations are extended to those in Eastern Canada who recruited for this movement this year. The general satisfaction of farmer employers with the type of men provided should be highly pleasing to those who selected the men. Little or no complaint was received with respect to their suitability. It is believed that the men, too, were reasonably well satisfied and this may be attributed in large measure to the splendid weather which prevailed throughout the harvest season. In comparison with one year ago the whole movement was highly satisfactory, and in fact, the harvest labour program of 1952 will go down in the records as the most easily administered of any within recent years. Appreciation for 1163 satisfactory workers is expressed to the eastern authorities for their contribution to this record. Harvest wages showed an easier tendency, though in some cases \$1.00 per hour was paid. The average was probably \$8.50 to \$9.50 per day.

(c) Alberta Harvesters

There was a satisfactory response within the province for harvest help and 1830 of these men were placed, the proportion of these to Prairie Farm Workers being about the same as in 1951.

(d) Service Personnel

There was no organized placement of Service Personnel for harvest work. This was partly because of the unhappy experience of 1951 and partly because the need was at no time so acute.

(e) Berry Pickers

Forty-eight girls were recruited and referred to Employment Offices for dispatch to British Columbia for this work.

(f) Combines

This year for the first time grain combines entered Canada from the United States for custom harvesting in this province. No responsibility was assumed in locating work but permits were issued for the entry of 33 machines which operated south and east of Calgary.

Immigrants

(a) Sugar Beet Workers

The sugar beet labour situation in the spring of 1952 caused some concern.

Church groups made commitments for sponsored movement which they found difficult to achieve. The result was that some of the workers arrived rather late. On the whole, however, the final development did not cause any really serious inconvenience. The total number of immigrants brought into the sugar beet area through the Department of Labour was 1268, of whom 994 were workers. These were comprised of 272 families and 95 single persons. It is believed that 66 families and 22 single persons, for a total of 496 Dutch persons also came into the sugar beet area. The breakdown of hand labour sources for the 1952 crop follows:

Acreage Analysis of Hand Labour Working the 1952 Crop Beets - (%)							
Total Acreage - 36,767							
Pre War		Growers		Post War		Immigration	
Japanese	European	Immigr.	Own Family	European	1952	Immigration	
				Immigr.	D. of L.	Other	Menn. Misc. Total
14.1	5.0		13.4	34.7	17.1	7.0	4.1 4.6 100

It is believed that there is a stronger tendency for the 1952 movement to stick to beet work and the selection of all families seemed to have been better in 1952 than in the previous year.

Twenty-seven Indian workers were brought in from Saskatchewan but they remained only for the thinning operation. Their contribution was satisfactory though limited. It was commensurate to the cost involved, which was shared by two Governments and the sugar company.

The Provincial Department continues to maintain, under the Labour Agreement, a full-time labour fieldman in the Lethbridge area.

(b) General Farm Workers

The only movement of immigrants for general farm work has been the single Germans. The general quality of these workers as to experience and suitability for farm work has been rather better than former movements of displaced persons. Some very good reports have been received from farmers. The Wastage out of agriculture, however, will be equally high with this movement. In this province, an effort was made to screen applicants carefully with a view to ensuring suitable employment conditions. No doubt this assisted to some extent but the number of workers lost to industry before completion of the 12 months contract comes perilously close to placing the movement in the position of a temporary relief rather than a long term assistance to agriculture. As of December 31st, of the 148 single German immigrants received, about half are no longer in agriculture.

Statistical Review

The figures given hereunder indicate statistically the movements and placements during this year with 1951 figures for comparison:

General Farm Labour	1951	1952
(a) Requirements	999	810
(b) Placements	705	590
Seasonal Movements		
(a) Farm Workers To Ontario	187	203
(b) Prairie Farm Workers	936	1,163
(c) Alberta Harvesters	2,141	1,830
(d) Service Personnel on Harvest Leave	650	---
(e) Berry Pickers To B. C. (Women)	---	48
(f) Combines admitted from U. S.	---	33
Immigrants		
(a) Beet Workers	744	994
(b) General Farm Workers	76	148
TOTAL	6,438	5,819

Investigations and Re-placements
(Provincial Field Staff)

(a) Displaced Persons (previous arrivals)	70	52
(b) General Labour, etc.	524	510
(c) German Farm Workers (Incl. applicants, transfers, etc.)		215

MASTER FARM FAMILY PROGRAM

In its fourth year of operation this program appears to maintain its popularity with the public. No changes were made in the score card and scoring was completed rather earlier than in previous years. For record purposes, the following is a list of the families to whom the award has been made since its inception:

- 1949 - W. J. Edgar Family, Innisfail, Alberta
 J. G. Dusseault Family, Vimy, Alberta
 J. F. Melenka Family, Warwick, Alberta
 L. R. Jensen Family, Magrath, Alberta
 Joseph Paguette Family, Donnelly, Alberta
- 1950 - Fred Labreque Family, Spirit River, Alberta
 E. S. Parson Family, Boyle, Alberta
 Roy Ballhorn Family, Wetaskiwin, Alberta
 Charles J. Kallal Family, Tofield, Alberta
 Emile J. Cammaert Family, Rockyford, Alberta
- 1951 - Floyd Gilkyson Family, La Glace, Alberta
 John G. Porozni Family, Willingdon, Alberta
 J. W. Hosford Family, South Edmonton, Alberta
 Victor Watson Family, Airdrie, Alberta
- 1952 - E. R. Lewis Family, Winterburn, Alberta
 John Lambert Family, Manning, Alberta
 John Skrypitsky Family, Mundare, Alberta
 J. H. Schmaltz Family, Beiseker, Alberta
 Jesse Cole Family, Clive, Alberta

Thirty-one families were nominated this year.

PRAIRIE RURAL HOUSING COMMITTEE

The final meeting of this committee was held in Edmonton during this year and winding up its affairs is now only a matter of routine. The following reports have been published in bulletin form and made available for public distribution:

Farm Home Planning
 Farm House Remodelling
 Farm Kitchen and Utility Rooms

EDITORIAL AND RADIO

A steady flow of information was directed to farm people of Alberta throughout the year. Radio contact was maintained three times weekly over C.K.U.A. on the Alberta Farm and Home Forum, sponsored by the Alberta Department of Agriculture and the Faculty of Agriculture, University of Alberta.

On the Farm and Home Forum, topics of timely interest to farmers and homemakers were discussed by members of the Department and the Faculty of Agriculture, and each program concluded with seasonable notes prepared and presented by the Extension Service. Twice monthly, talks to homemakers were broadcast by the Home Economics Division. One hundred and fifty-four talks were presented on this radio program in 1952. Members of various branches of

the Department contributed to eighty-three of them.

The publication "Farm Notes" was issued weekly. This release contains items of timely interest which are used extensively by radio press. Requests for copies are also received from agricultural workers, instructors, business concerns and others not directly connected with the press. These notes include farm suggestions, homemaking hints, project announcements and progress, and other items of agricultural interest. During the year, 51 issues of Farm Notes were prepared containing 241 items in all.

Bulletins and circulars retain their popularity and the demand for this type of extension release is keen. The trend continues towards plain language and attractive presentation. Agricultural publications printed or reprinted by the Department in 1952 included Mastitis of Poultry, Hog Pen and Cattle Self Feeder Plans, Couch Grass, Leafy Spurge, Toad Flax, Hay and Pasture Crops, Keep Ducks on the Wing, and Farming in Alberta. Dairy Barns in Alberta, a joint publication of the Department and the University, was also printed during the year. Total bulletins distributed this year in excess of 176,000.

RESEARCH EXTENSION OFFICER

During 1952 twenty-one Farm Science articles emanated from the Lethbridge Research Extension Office, nine of them during the incumbency of Mr. E. B. Swindlehurst.

Fifty inquiries were supplied directly with information by letter (34), phone (7), or personal interview (9). This service was increasing over former years as more mail, and persons requiring general rather than technical advice, were referred to the extension office. This trend has not been evident following the long closure of office from June 16 to September 21. Only five tours of the Laboratories were conducted, involving fourteen persons. Six rural meetings, having a total audience of approximately 200, were addressed.

Eleven conferences and scientific meetings, occupying twenty days, were attended. Thirteen field trips were made, nine with technical personnel while four could be classed as farm service extension trips.

Duties performed this season, not directly concerned with the Research Extension Office, were the judging of one grain show and two horticultural fairs. In addition, two periods of nine and five weeks duration were spent at Edmonton headquarters in the Extension Editor's Office. Only twenty-seven weeks were actually spent "in office" at Lethbridge this season.

AGRICULTURAL ENGINEERING

Demonstrations

An increased range of demonstrations of Agricultural Engineering topics was held during 1952. In addition to the tillage machinery events which for a number of years have received the greatest attention, combine demonstrations were held at three points and having machinery demonstrations at two points. Tillage machinery demonstrations, competitions and field days numbering 77 were planned, but due to rain 28 of these were cancelled. A seed bed preparation competition was held at Lacombe and it appears to offer possibilities that previous types of competitions have lacked, namely a selection of the best combination of machines, and also an opportunity to follow through the results of different methods, both for the season and over a number of years.

The tillage machinery field days, of which only 14 were held, attracted an average of 39 persons. Demonstrations, of which there were 19, drew an average crowd of 91, and at the competitions, crowds varied considerably but averaged about 190.

The Barley Harvesting Demonstrations were received more enthusiastically than any previous harvesting events. The attendance averaged 155 and the careful attention paid to both the machine adjustment and the principals of threshing would indicate that this type of event should be encouraged.

Meetings and Short Courses

Agricultural engineering was discussed as a major topic at a total of 41

meetings and short courses with aggregate attendance of 5000. Topics included machinery, buildings, rural electrification, and water and sewage. Requests for an agricultural engineering topic on at least seven other short courses had to be refused because of the lack of staff.

Farm Visits during the year increased very appreciably to a total of 112, with the main item of interest being farm buildings, and the second, farm machinery.

On one farm, in co-operation with G. R. Sterling of the Field Crops Branch, a contoured terrace system was surveyed and developed. Preliminary results have been assessed and observations will continue next year.

Publications, Plans and Pamphlets

The publication, "Dairy Barns for Alberta", was completed and published during the year. With very minor changes this publication was purchased by the Saskatchewan Department of Agriculture, thereby reducing the cost to both provinces. Early in the year a revised pamphlet on Grain Drying was mimeographed, and distribution approached 3500 copies before spring. Plans for general purpose Hog Barn were drawn up in co-operation with the Agricultural Engineering Department of the University of Alberta.

Letters and Correspondence

This portion of the work again increased to reach a total of over six hundred letters during 1952. Inquiries on farm buildings accounted for 28 per cent of the volume, water system and sewage 15 per cent, and farm machinery 13 per cent of the total. The remaining 44 per cent included practically all phases of Agricultural Engineering.

Radio and Press

During the year, 15 radio talks or interviews were presented, 6 over Radio Station C.K.U.A. and the other 9 divided almost equally between the other three Edmonton stations. Twelve articles were written for Farm Notes.

General

The demand for Agricultural Engineering work has risen to a point beyond the ability of present personnel to handle. This was especially true during the winter, when the bulk of the short courses were held. Not only was it impossible to attend all meetings at which agricultural engineering topics were desired, but also, too little time was available to prepare material for meetings, to answer correspondence, and carry on the other necessary activities.

STATISTICS

General

The Statistics Division of the Extension Service Assists in Compiling, and is responsible for keeping official statistics related to agriculture in the province.

The statute creating the Alberta Department of Agriculture requires that "The Department shall . . . collect information and statistics relating to (the) agricultural . . . interests of the Province". However, the Dominion Bureau of Statistics publishes agricultural estimates for each province and for Canada, and a co-operative arrangement has been effected with the Agriculture Division Bureau. In most cases this office releases the Alberta estimates simultaneously with the Dominion, giving greater detail, by grades or classes and/or by crop districts, as the Alberta public or the objects of the Department may require.

In 1952, ten crop reports and final "Autumn Summary" were issued. In addition, thirteen summaries of crop conditions in Alberta were prepared and wired to Ottawa for use in Dominion Bureau of Statistics telegraphic crop re-

ports. This work is based on the return of questionnaires mailed to nearly 250 crop correspondents at two-week intervals throughout the growing season. More frequent reports are required from District Agriculturists.

The number on mailing lists and the type of statistics requested for 1952 were as follows: general statistics, 148; live stock statistics, 15; field crop statistics, 12; crop reports and "Autumn Survey", 734 (including crop correspondents).

During the year, 62 written requests for statistical information were received from the public. In addition, members of this and other Departments of the Government made calls on the Division.

The booklet "Farming in Alberta, Canada", first published in 1949, was revised extensively and reprinted in 1952.

Field Crops

A good crop of forage crop seed was produced in 1952. Preliminary estimates show a production of close to 20 million pounds as compared to 12.5 million in 1951.

Estimates of the acreage, production and value of principal field crops are as follows:

Grain Crops	Seeded Acres	Yield per Acre (bu.)	Production (bu.)	Price per Unit (\$)	Total Value 1952 (\$)	Total Value 1951 (\$)
Wheat	6,404,000	26.9	172,000,000	1.53*	266,600,000	229,520,000
Oats	2,587,000	49.9	129,000,000	0.70*	90,300,000	91,120,000
Barley	3,336,000	35.4	118,000,000	1.10*	129,800,000	113,400,000
Rye	380,000	20.5	7,800,000	1.42	11,076,000	8,231,000
Mixed Grain	71,300	40.7	2,900,000	0.78	2,262,000	2,401,000
Flaxseed	151,000	13.2	2,000,000	3.18	6,360,000	6,123,000
	12,929,300				506,398,000	450,795,000
Root Crops:						
Potatoes	16,700	195.0 tons	3,256,000	1.50	4,884,000	4,049,000
Sugar Beets	36,741	13.05	480,000	15.00*	7,200,000	5,007,000
	53,478				12,084,000	9,056,000
Forage Crops:						
Tame Hay and Clover	1,292,000	1.75	2,261,000	15.50	35,046,000	38,287,000
Fodder Corn	2,200	6.70	14,700	7.00	103,000	70,000
	1,294,200				35,149,000	38,357,000
Miscellaneous: (Forage Crop Seed; Vegetables for processing; dry peas; mustard seed)						
Total acreage and value	14,277,000				6,013,000	4,859,000
					559,644,000	503,067,000

* Prices used by the Alberta Department of Agriculture for the purpose of arriving at approximate values for comparison with 1951 estimates. Estimated initial payments received by farmers were: Wheat \$1.11; Oats \$0.49; Barley \$0.76; and sugar beets \$11.00.

Live Stock

In the year ending June 1, 1952 changes in the live stock population of Alberta were estimated as follows: cattle and calves, +12 percent; sheep and lambs +17 percent; swine, +26 percent. With the exception of swine in British Columbia (+34 percent) all increases were the highest for any province in Canada.

Under favorable circumstances, cattle feeding operations in particular developed rapidly in recent years. After the embargo on live stock movements to United States dropped to support levels. The markets at Edmonton and Calgary by months indicate the situation:

Month	Steers (Good)		Hogs (B1 Dressed)		Lambs (Good)	
	Edmonton (\$)	Calgary (\$)	Edmonton (\$)	Calgary (\$)	Edmonton (\$)	Calgary (\$)
January	30.30	30.92	27.28	26.70	29.09	31.04
February	28.14	28.32	24.93	24.30	25.91	25.92
March	24.50	24.34	24.22	23.03	23.25	22.28
April	23.46	23.05	24.67	23.36	23.65	20.51
May	21.25	22.04	24.10	23.48	23.71	21.03
June	22.59	23.78	24.84	24.43	24.02	21.47
July	23.71	24.22	24.56	23.89	25.20	24.26
August	23.73	24.49	25.31	24.75	24.22	26.45
September	22.48	22.54	24.99	24.32	20.94	21.68
October	19.96	21.11	24.32	23.46	19.20	19.08
November	20.05	21.83	24.10	23.42	18.56	18.55
December	21.21	22.75	23.80	23.43	20.16	20.57
Year 1952	23.45	23.60	24.60	24.00	22.45	22.05
Year 1951	31.75	32.50	32.70	32.55	31.45	31.80
Year 1950	24.30	24.40	28.40	27.80	24.06	25.48
Year 1949	19.03	19.83	29.86	29.18	20.53	21.46
Year 1948	18.01	18.27	27.87	28.36	18.32	18.52

The estimated number of live stock on farms at June 1, together with production (net sales, farms slaughtering and inventory change) and value for 1952 compared to 1951 were as follows:

	Number on Farms June 1, 1952	Production 1952		Value 1951 (\$)
		Number	Value (\$)	
Cattle	1,261,000	474,586	86,297,000	88,501,000
Calves	493,000	162,683	12,256,000	16,044,000
Sheep and Lambs	387,000	167,434	2,878,000	4,108,000
Swine	1,170,000	1,828,877	67,786,000	69,087,000
Horses	239,700	17,726	713,000	934,000
Total Value of Live Stock Production			169,930,000	178,674,000

Live Stock Products

The number of cows kept mainly for milk in Alberta increased from 277,600 in June 1951 to an estimated 286,000 in 1952. At the same time, deliveries of butterfat for creamery butter decreased 5 per cent, while the production of milk and cream for the fluid trade increased 5.5 per cent.

Compared to 1951 census figures there was little change last year in numbers of domestic fowl -8,420,000 compared to 8,348,000. However, the monthly average number of hens over 6 months old increased from 2,842,000 to 2,970,000. More hens and higher production per hen resulted in increased egg production, but farm income from this source decreased owing to lower egg prices.

The greatest change in the poultry meat situation as compared to 1951 was an increase in the production of turkeys. This is indicated by the fact that in 1952, 11,641,000 lbs. of turkey meat were marketed compared to 7,186,000 in 1951.

Statistics showing the production and value of live stock products for 1952 and values for 1951 are as follows:

Dairy Products	Unit	Production	Price per unit \$	Total Value	
				1952 \$	1951 \$
Butterfat for Creamery					
Butter	lb.	22,681,000	0.596	13,515,000	15,108,000
Dairy Butter Produced	lb.	5,095,000	0.560	2,853,000	3,509,000
Milk and Fat for					
Ice Cream	cwt.*	412,740	2.50	1,031,000	982,000
Milk for Cheese and					
Concentrating	cwt.	596,220	2.74	1,631,000	1,609,000
Milk and Cream for					
Fluid Sales	cwt.*	3,329,570	4.25	14,145,000	12,591,000
Milk Consumed on					
Farms	cwt.	1,859,000	2.43	4,517,000	5,076,000
Milk fed to Farm					
Animals	cwt.	2,377,000	2.43	5,776,000	6,009,000
Skim Milk etc. Fed					
on Farms	cwt.	6,832,860	0.32	2,187,000	2,424,000
Value of Dairy Products ----				45,655,000	47,308,000
Poultry Products					
Commercial Eggs	doz.	33,048,000	0.331	10,949,000	14,164,000
Hatching Eggs	doz.	1,065,000	0.574	611,000	535,000
Poultry Meat	lb.	39,123,000	0.347	13,581,000	13,826,000
Value of Poultry Products ----				25,141,000	28,525,000
Honey	lb.	4,900,000	0.12	***618,000	***569,000
Wool	lb.	1,908,000	0.36	687,000	1,080,000
Fur Farming **					
(Animals add Pelts)	No.	153,344		2,836,000	2,826,000
Total Value of Live Stock Products ----				74,937,000	80,308,000

*Milk equivalent

**Year ending August 31, 1952

***Includes the value of wax.

SUMMARY OF AGRICULTURAL PRODUCTION

The estimated value of principal agricultural commodities produced for the years 1950 to 1952 inclusive are as follows:

	1950 \$	1951 \$	1952 \$
Field Crops	353,770,000	503,067,000	559,644,000
Live Stock	156,470,000	178,674,000	169,930,000
Dairy Products	42,402,000	47,308,000	45,655,000
Poultry Products	20,266,000	28,525,000	25,141,000
Honey and Wax	655,000	569,000	618,000
Wool	1,100,000	1,080,000	687,000
Fur Farming	1,970,000	2,826,000	2,836,000

FARM INCOME AND OPERATING EXPENSES

Preliminary estimates show high farm incomes from farming operations in Alberta for 1952. However, farm operating expenses also were high. The following three statements prepared by the Agriculture Division of the Dominion Bureau of Statistics provide comparative figures on farm income and expenditures for the years 1950 to 1952 inclusive:

CASH INCOME FROM THE SALE OF FARM PRODUCTS

	1950		1951		1952	
	'000	% of	'000	% of	'000	% of
	\$	total	\$	total	\$	total
Field Crops	1 62,264	44.0	241,786	51.4	317,138	62.3
Live Stock	150,389	40.8	162,889	34.7	130,812	25.7
Dairy Products	27,449	7.4	30,470	6.5	30,418	6.0
Poultry Products	13,736	3.7	20,226	4.3	17,091	3.4
Honey	585	.2	545	.1	584	.1
Wool	1,123	.3	1,077	.2	686	.1
Fur Farming	2,359	.7	1,974	.4	2,252	.4
Miscellaneous	<u>5,553</u>	<u>1.5</u>	<u>7,080</u>	<u>1.5</u>	<u>7,679</u>	<u>1.5</u>
Total Income from the Sale of Farm Products	*363,458		466,047		506,660	
Supplementary Payments	<u>526,</u>	<u>1.4</u>	<u>4,235</u>	<u>.9</u>	<u>2,349</u>	<u>.5</u>
TOTAL CASH INCOME	368,714	100.0	470,282	100.0	509,009	100.0
	=====		=====		=====	

* Includes all payments actually received by Farmers from the sale of farm products, plus interim and final payments of participation certificates issued by the Canadian Wheat Board in each calendar year.

FARM OPERATING EXPENSES AND DEPRECIATION CHARGES

	1950	1951	1952
	\$ '000	\$ '000	\$ '000
Taxes	15,525	15,836	17,150
Gross rent	27,392	38,221	35,751
Wages paid to labour	28,203	31,070	36,502
Interest to indebtedness	6,335	6,873	7,151
Feed and seed purchased	16,922	16,801	16,697
Tractor expenses	23,443	24,862	22,298
Truck expenses	9,194	11,750	13,269
Automobile expenses for farm business	7,060	9,107	9,298
Engine and combine expenses	2,785	3,101	4,135
Machinery repairs and shop charges	13,579	12,969	13,492
Fertilizer	2,409	3,271	3,290
Fruit and vegetable supplies	2,754	2,948	2,984
Repairs to building	4,246	6,253	7,086
Miscellaneous	<u>10,707</u>	<u>12,205</u>	<u>12,332</u>
TOTAL, Operating expenses	170,554	195,267	207,435
Depreciation, building and machinery	34,628	38,335	41,612
TOTAL, Operating expenses and depreciation	<u>205,182</u>	<u>233,602</u>	<u>249,047</u>
	=====	=====	=====

NET INCOME OF FARM OPERATORS FROM FARMING OPERATIONS

	1950 \$ '000	1951 \$ '000	1952 \$ '000
Cash Income from the Sale of			
Farm Products	363,458	466,047	506,660
Income in Kind	45,207	50,537	48,954
Value of Changes in Inventory	+ 23,503	+114,092	+ 63,412
GROSS INCOME	432,168	630,676	619,026
Operating expenses and Depreciation	205,182	233,602	249,047
NET INCOME (excluding supplementary payments)	226,986	397,074	369,979
Supplementary Payments (P.F.R.A.)	5,256	4,235	2,349
NET FARM INCOME	232,242	401,309	372,328

IRRIGATION

The experience gained last year, combined with satisfactory weather and staff co-operation, resulted in an appreciable volume of accomplishment in field and office over the full season. Some delay in early months was occasioned by inexperienced personnel who required to be trained. Most of these were University students who were available only from May to September. It should be noted also that per man output is greater in the cooler months. Two experienced men are being retained on drafting over the winter months and these will be available for early work in 1953. If present plans mature it would appear that an earlier start may be made next spring.

Land levelling was accelerated this year by the addition of D7 caterpillar tractor, a bulldozer, a 10-yard BE-GE scraper, a land-plane, 2 trailers for operators and 2 half-ton trucks. This puts two complete units in the field and it resulted in three times as many hours worked and almost five times as many acres improved as in 1951.

Round the clock operation was conducted for part of the season and the total payroll was only slightly more than for only one operator last year. Some stoppage was experienced for major and minor repairs and it is believed that closer supervision of machine maintenance would increase efficiency.

Camp was established at Grassy Lake with one office trailer and two sleeping trailers. Accommodation and subsistence arrangements were apparently satisfactory to the men.

The number of personnel employed varied throughout the season and the following indicates the number and their duties at the beginning of each month:

Month	*Permanent Staff	Instrument Men	Rod men
January-February			
March-April	2	-	-
May	2	-	2
June	2	4	4
July	2	5	7
August	2	5	7
September	2	5	7
October	2	2	3
November	2	2	2
December	2	2	2

* C. J. McAndrews - Extension Irrigationist
S. Noreika - Draftsman

Administration could have been greatly facilitated by employment of a part-time stenographer, and lacking this one of the rod-men was employed as assistant draftsman during July, August and September. A solution to this problem

would be employment of one male stenographer to assist in these two capacities.

Assistance to the Colonization Manager of the St. Mary's and Milk Rivers development consisted of land inspections for settlement and pump irrigation purposes, reports on these, the classification of lands for irrigable rights, and the pricing of Government lands for settlement sale. This work required a continuous amount of field and office work which was combined quite satisfactorily with the ditch survey and land levelling work.

LAND LEVELLING

Number of land levelling jobs worked under the Colonization program	42	
Number of land levelling jobs worked on privately owned lands	17	
Number of jobs which was not land levelling (dugouts, construction, etc.)	14	
Total number of jobs		73
Operating time on land levelling	2,822.5 hours	
Operating time on other jobs	229.5 hours	
Total operating time	3,052 hours	
Approx. total payroll time of operators	3,500 hours	
Approx. cost of operations	\$26,825.00	
Approx. total revenue from operations	\$27,000.00	
Approx. reserve in Trust Account	\$15,000.00	
Total acreage improved by land levelling	2,900 acres	
Cost per acre improved	\$ 8.51	
Moneys collected by self on land levelling	\$ 5,701.50	
TOTAL hours bulldozer	188	
TOTAL hours scraper	2,229	
TOTAL hours land plane	635	

SURVEY SERVICE

Number of Quarter Sections surveyed and mapped for location of farm ditches and classifications	140	
Approx. number of irrigable acres in above survey	14,000	
Number of reclassification surveys	46	
Approx. number of irrigable acres in re-classification surveys	3,600	
Number of surveys for land levelling	75	
Number of irrigable acres surveyed for land levelling	4,500	
Number of surveys for pump irrigation, and classification of same	4	
Number of irrigable acres surveyed for pump irrigation	700	
Survey of Brooks Horticulture Station:		
Location of Guide Line Stations	1	
Topographic Survey	1	
Acreage surveyed on Brooks Horticulture Station	200	
Survey of water spreading system at Irvin, Alberta	1	
Acreage surveyed on Irvin Farm	60	
Total number of surveys	268	
Total acreage surveyed	23,060	

INSPECTION OF LANDS

Number of Quarter Sections inspected for settlement purposes for Colonization Manager	54
Number of Quarter Sections inspected for pump irrigation reports to Colonization Manager	27

Number of Quarter Sections inspected for classification purposes	1 40	
TOTAL Land Inspections		221

OFFICE WORK

Drafting:

Number of maps of Quarter Sections drafted as original plats	140	
Number of plats drafted as tracings	79	
Number of plats drafted as pencil copies	56	
Maps of Districts drafted --		
For District Agriculturist	1	
For Experimental Station	1	
For Colonization Manager	1	
For Headquarters, Edmonton	2	

Plans Drafted:

For office accomodation for Lethbridge Department of Agriculture Staff	2	
For Home Economist	1	
For Office Furniture	10	
For trailer furnishings	3	
For District Agriculturist	4	
TOTAL Maps and Plans drafted		310
Number of prints made from the above drafted tracings		316

REPORTS

Number of Soil Reports prepared	1 46	
Number of land levelling estimates prepared	76	
Number of Classification Reports prepared	1 86	
Number of pump irrigation Reports prepared	21	
Summary reports on land levelling prepared	9	
Report of irrigation principles and practises as a result of a joint meeting of Alberta Dept. of Agriculture staff and Experimental Station staff prepared by P. Jamieson, R. A. Simmons, C. J. McAndrews	1	
Report on Columbia Basin Projects as studied from trip into the area	1	
Annual Report	1	
Report on schedule of work	1	
TOTAL Reports		442

Issued:

Reports to land owners	76	
Reports to Colonization Manager	2 92	
Special Reports to Headquarters	14	
Reports to Veterans Land Act	30	
TOTAL Reports issued		412
Maps to land owners	1 25	
Maps to Colonization Manager	80	
Maps to Veterans Land Act	30	
Maps and Plans to others	25	
TOTAL Maps issued		260

LAND LEVELLING STATEMENTS

Issued - to Colonization Manager	72
- to S.M.R.D. accounts	1 00
Bulletins, circulars	4 14
Mimeographed notes on irrigation prepared and issued to students at Olds School of Agriculture	89

GENERAL

Number of Colonization Tours and meetings attended	5	
Number of other committee meetings including A.I.A. and A.I.C.	10	
Number of farmers meetings, demonstrations or field days attended	21	
TOTAL Meetings attended		35
Approx. total attendance	4,121	
Number of talks given at meetings	9	
Short course in irrigation at Olds School of Agriculture:		
Number of lectures	24	
Number of students	69	
Number of farm visits	3 69	
Number of office interviews	3 61	
Number of phone calls	2 87	
Number of letters written	3 73	
Number of times slides on irrigation shown	13	

DISTRICT AGRICULTURIST SERVICE
PERSONNEL, CHANGES AND APPOINTMENTS

Personnel as of December 31, 1952.

J. L. Anderson, Medicine Hat	Fred Magera, Willingdon
A. W. Beattie, Berwyn	H. H. Micheal, Claresholm
N. F. Bell, Calgary	W. A. Moisey, Camrose
E. H. Buckingham, Vermilion	F. L. Paquin, Falher
A. A. Campbell, Evansburg	L. H. Peacock, Sangudo
M. Cheverette, St. Paul	W. J. Perkins, Hanna
E. A. Chisholm, Rocky Mtn. House	S. W. Pettem, Drumheller
N. A. Chomik, Ryley	W. N. Pidruchney, Vegreville
J. S. Duncan, (Assistant), Red Deer	R. D. Price, Stettler
J. M. Fontaine, Edmonton	W. C. Proctor, Wetaskiwin
H. J. Fulcher, (Assistant), Edmonton	L. W. Rasmussen, Lacombe
L. Gareau, Bonnyville	J. S. Roblee, Wainwright
G. L. Godel, Athabasca	W. A. Ross, Westlock
J. B. Gurba, Myrnam	G. W. Shewchuk, Spirit River
J. R. Gylander, Leduc	R. A. Simmons, Taber
P. Jamieson, Lethbridge	D. L. Steed, Cardston
J. D. Jantzie, Coronation	J. T. Stanatka, Grande Prairie
J. L. Kerns, Ponoka	F. Strashok, Smoky Lake
I. Lapp, Brooks	K. H. Walker, Strathmore
J. S. Lore, (Assistant), St. Paul	B. J. Whitbread, Edmonton
H. McPhail, Olds	L. D. Williams, Sedgewick
J. L. Eaglesham, Red Deer	C. E. Yauch, (Assistant) Lethbridge

Appointments

J. S. Duncan - Assistant at Red Deer
 J. D. Jantzie - District Agriculturist at Coronation
 J. S. Lore - Assistant at St. Paul
 Peter Maron - Assistant at Lac La Biche

Transfers

E. A. Chisholm from Assistant at Red Deer to District Agriculturist at Rocky Mountain House.

R. A. Simmons from Assistant at Lethbridge to District Agriculturist at Taber.

S. W. Pettem from School of Agriculture, Vermilion, To District Agriculturist at Drumheller.

N. F. Bell from District Agriculturist at Drumheller to District Agriculturist at Calgary.

C. E. Yauch from Principal, School of Agriculture, Olds, to Assistant District Agriculturist at Lethbridge.

Resignations

Peter Maron - Assistant at Lac La Biche - to take a position with a commercial firm.

John Moore - District Agriculturist at Youngstown - to take a position - with a commercial firm.

New Offices

Lac La Biche
Rocky Mountain House
Coronation

Offices Closed

Youngstown

New Premises

Calgary from Old Telephone Building to new Alberta Office Building, 134 - 8th Avenue East Calgary.

Lethbridge from old Court House to new Court House, Lethbridge.

Total

41 Offices
44 District Agriculturists and Assistants

FARM MANAGEMENT

It can be reported that an encouraging and steady amount of progress has been made in the field of farm management, and particularly in our Balanced Farm Program. Sixty-four farmers have started on a complete balanced farm program. An additional 652 farmers have adopted a partial farm plan embracing one or more phases of a fully balanced plan. Cost accounts were prepared for 20 farmers. Meetings dealing specifically with farm management were held on 154 occasions. The subject was discussed, along with other subjects, at 409 other meetings. A total of 2,898 persons were assisted with farm management problems through correspondence and interviews.

SOIL CONSERVATION

Continued emphasis has been given soil conservation through projects, meetings, field days, demonstrations and publicity. "Save the Soil" campaigns, "Farm Improvement Competitions" and "Trash Cover" campaigns have materially helped to conserve soil. A total of 3,196 farmers participated in one or more of the above programs. Two hundred and eight soil conservation demonstrations were conducted. These were attended by 4,521 persons. An aggregate of 17,343 farmers attended 231 specifically soil conservation meetings. An additional 7,639 farmers were given assistance or advice on soil conservation problems through office calls and correspondence.

WEED CONTROL

The problems of weed control are being more effectively dealt with where Agricultural Service Boards are active. The Field Supervisors are working - closely with the District Agriculturists throughout the year. Seed cleaning - plants, seed grain drill surveys, and weed control demonstrations, both chemical and cultural, have been positive aids in dealing with the weed menace. Eleven community seed cleaning plants and 65 farm plants were assisted in organization and operation. Weed control demonstrations were conducted on 158 farms, with 4,051 farmers attending or viewing the results. Seventy-two special weed control meetings were organized, having a recorded attendance of 8,377 persons. District Agriculturists' records show a total of 5,461 farmers were given help or advice through office calls and correspondence.

CROP IMPROVEMENT - Grain

Information is constantly in demand regarding the yield, disease resistance, earliness and market acceptability of new varieties to the farmer. Much time was spent locating suitable registered and commercial seed and in getting buyers and sellers together. Seventy variety demonstration plots were arranged throughout the Province, and 44 field days were organized to enable farmers to view the results. Records show a total of 3,973 farmers who viewed the plots. Quantities of registered seed distributed through the agency of our offices was 56,802 bushels, with a larger total of 636,100 bushels of commercial seed. Seventy-eight crop inspections were made in connection with registration of fields. Persons given information and advice through office calls and correspondence - numbered 5,653.

CROP IMPROVEMENT - Forage

The many inquiries coming to the District Agriculturists indicate the interest of farmers and ranchers in forage crops, and lack of factual experimental and research knowledge on the subject. It is felt by most of the - men in the field that the possibilities involved in the full utilization of improved pastures and forage crops has only been touched. A number of demonstrations, which it is hoped will show some of these possibilities, are being placed on - farms throughout the Province.

Forage seed production took a dominant place in acreage of forage crops in the Province. Much time and effort has been spent assisting farmers with harvesting methods, as well as the seeding and cultural practices involved. - Ninety-nine farmers participated in forage seed production plots on their farms. Ninety-three farmers put down variety plots to demonstrate the value of different kinds of forage crops in their community. Thirty-five field days were held, having a total attendance of 3,570 farmers. Participants in the Pasture Improvement Project numbered 299. Sixty-three farmers utilized the Balanced Farm Project, under which forage seed is supplied at a reduced price to assist farmers to establish a balanced farm program. At least 5,469 farmers were given information and advice through office calls and correspondence on the subjects of forage crop improvement.

PLANT PESTS AND DISEASES

The services of the District Agriculturists are in constant demand to assist in the organized battle against crop pests or diseases. Fifty - one demonstrations were conducted dealing with plant pests or diseases. These were attended by 407 farmers. Specimens of disease or insect affected plants sent to the proper authorities for identification numbered 403. An additional 2,276 - farmers were given assistance under this heading through office calls and correspondence.

LIVESTOCK IMPROVEMENT

A positive increase is reported by District Agriculturists in the number of purebred livestock placements on farms. This is particularly true of pure-

bred female livestock. Fifty-one demonstrations were conducted, involving livestock judging or management. These were attended by 3,172 farmers. Special livestock meetings totalling 271 were conducted with a recorded attendance of 16,246 persons .

No. of Herds or Flocks Assisted with Selection or Culling

	No. of Herds or Flocks	No. of Animals or Birds
Beef	193	3,017
Sheep	33	1,414
Swine	118	1,499
Poultry	100	9,129

Farmers assisted with registration of purebred animals numbered 784. Departmental dehorners were loaned to farmers and ranchers on 1,119 occasions. In addition, 7,800 farmers or ranchers were given assistance with various phases of livestock husbandry.

Live stock Placements

	Male	Female
Horses	45	37
Cattle	1,030	1,071
Sheep	191	2,333
Poultry	441	4,944
Swine	427	640

LIVESTOCK MARKETING

No. of Sales Assisted	35
No. of Animals Sold	7,625
Estimate Money Earned or Saved for Farmers . .	\$121,900
Persons Otherwise Assisted	867

LIVESTOCK PESTS AND DISEASES

A very substantial portion of the District Agriculturists' time and effort has been spent on the control of livestock pests and diseases. Among those requiring the most attention were Bang's and T.B. control in cattle, and coyote control. Foot and mouth disease in cattle caused much concern among livestock producers, and precautionary methods were required. Bang's control in cattle is organized in almost every district in the Province. This is also true in T.B. control. Coyote control, spearheaded by District Agriculturists and the Agricultural Service Boards, has achieved notable success in dealing with this perennial problem. D. L. Steed, District Agriculturist at Cardston, estimated conservatively that at least \$90,000.00 has been saved for the livestock and poultry producers in his district during 1952, by the coyote control program.

The rabies outbreak in the Peace River district during the latter part of the year required the organizing ability and office facilities of our District Agriculturists in that area.

Statistics of Livestock Pests and Diseases

No. of farms participating in Bang's control	18,523
No. of calves vaccinated	92,956
No. of farms participating in T.B. control	2,534
No. of demonstrations	62
Attendance	1,173
No. Specimens forwarded for identification	431
Persons otherwise assisted	5,541

DAIRYING

The outstanding factor of Extension work in the field of dairying for 1952 has been the attention and interest focussed on the "loose housing" principle for dairy cattle and the "marketing parlor" closely associated with it. District Agriculturists have assisted dairy farmers to secure plans, have planned tours to visit dairy farms where these principles are in practice and have generally encouraged dairymen to closely study the possibilities and advantages of this System. Concentrated attention was given in 1952 to the greater use of improved pastures, forage harvesting methods, and the utilization of forage crops as silage.

Demonstrations of some phase of improved dairy practice were conducted on 124 occasions. These were attended by 1,239 farmers. Eighty-two dairymen are testing their herds, at least partly through the influence of our offices. Sixty special dairy meetings were organized in various parts of the Province. These were attended by 2,866 persons. Dairy farmers were given assistance in selecting or culling their herds. An additional 1,212 farmers were given assistance and advice through office calls and correspondence.

JUNIOR CLUBS

More and more attention is being focussed on Junior Club activities by parents, farm organizations and civic bodies. District Agriculturists are devoting a maximum amount of their effort and time to giving direction to Junior Farm Clubs. More attention has been devoted during 1952 to the training and development of local club leaders, and local leaders' short courses have been carried out in a number of districts. Three hundred and fifty-nine demonstrations for juniors and parents were conducted, with attendance of 11,285. The larger total of 1,288 junior club meetings were held with a total attendance of 34,104 persons.

Other junior activities included training of judging teams for local, provincial and national junior club competitions, judging at Junior Club achievement days, and conducting junior farm camps and rallies. Forty farm camps or junior farmer short courses were conducted, and these were attended by 3,307 juniors.

AGRICULTURAL SERVICE BOARDS

Close co-operation continues between the Service Boards and District Agriculturists. Examples of this are the coyote control program, Bang's and T.B. control, soil conservation, and weed control. The District Agriculturists work has generally been more effective where he has an active Service Board and co-operating Supervisor.

FARMSTEADS

A total of 324 farmsteads were planned with help from the District Agriculturists. During 1952 emphasis has been placed on farm shelterbelts and roadside tree plantings. A total of 520 field and roadside shelterbelts were planted through the influence of these offices, and trees numbering 897,904 were ordered through the District Agriculturists during 1952.

Tree planting demonstrations were conducted at many points throughout the Province. Help and advice was given to an additional 2,135 persons through office calls and correspondence.

BEEKEEPING

A few qualified District Agriculturists give direct help and advice to beekeepers but most of the inquiries are directed to the Departments' Specialists.

AGRICULTURAL FAIRS

Assistance is given to many Agricultural Fairs throughout the summer months. This assistance is in the form of help with organization and direction,

and acting as judge. District Agriculturists acted as judges in 51 instances and otherwise assisted with 47 others. Persons totalling 1,742 were given assistance through the various offices.

AGRICULTURAL SHORT COURSES AND MEETINGS

Short courses and meetings of a general nature were conducted at 320 points throughout the Province. District Agriculturists addressed 1,110 such meetings before an audience totalling 26,457.

AGRICULTURAL ENGINEERING

This subject and related topics continue in popular demand at short courses, special meetings and field days. Much of our agricultural population is involved with the use of machinery and it is only natural that this subject should have prominence.

Seventy-three agricultural engineering meetings, short courses or field days were organized. In addition to the above, 2,066 persons were given assistance through office calls or correspondence.

FARM LABOUR

District Agriculturists made 504 visits involving placement, re-placement or labour relations on behalf of agricultural immigrants to this Province. They placed 2,603 harvesters and 1,125 general farm workers. In addition, 308 workers were placed in industry when not required on farms.

PUBLICITY

Weekly newspapers and other farm publications are often used by District Agriculturists to bring agricultural information to the farming public. A number prepare regular weekly columns. A total of 1,876 articles or columns were prepared during the year.

Radio stations willingly co-operated with announcements putting agricultural information over the air.

MASTER FARM FAMILY

District Agriculturists assisted with the Master Farm Family Program by receiving nominations, giving necessary publicity, and acting on the district judging committee.

DAMS AND DUGOUTS

An increased number of dams or dugouts in the Peace River area were put in under the Department's policy of assistance. A total of 127 dams or dugouts were dug under the policy requiring inspections and approval by District Agriculturists.

MISCELLANEOUS

District Agriculturists acted on such advisory committees as Veterans' Land Act, Potato Advisory Committee, and the Irrigation District Advisory Committee. They helped to organize Feeder Associations, Farm Election Co-ops, warble fly control campaigns, grasshopper and rat control campaigns, and special toad flax control campaigns.

Other minor activities and details too numerous to mention received their attention,

Summary of District Agriculturists' Activities

	1952	1951
Number of meetings	3,136	2,641
Attendance at meetings	189,375	152,310
Farm visits	25,008	21,402
Office interviews	51,307	48,724
Telephone calls	46,834	43,004
Letters written	41,416	30,401
Bulletins distributed	103,697	121,861

HOME ECONOMICS

FOODS AND NUTRITION

School Lunch Program

Continued stress has been placed on the School Lunch and School Nutrition Program. Considerable time has been spent by the Extension Nutritionist compiling a set of quantity recipes for Hot Lunch Programs, as well as material to assist in the organization of these programs. This material has been used by the District Home Economists, Public Health Nurse, and others instrumental in starting new Lunch Programs.

Nutrition Study Course

No special effort has been made to organize Nutrition Study Groups this year, but material for the course was requested by 10 groups. Five of these groups, with a total membership of 116, returned the application forms and received further assistance from the District Home Economist or the Extension Nutritionist. The Study Course provides basic information and sources of information to assist individuals, families, or communities to discover their own nutritional needs and how they can meet these needs.

Short Courses for Dormitory Cooks

A three day short course on quantity food planning, preparation and service was held at the Olds School of Agriculture, June 30th to July 2nd inclusive. Quantity food preparation was carried on under the direction of Miss K. O'Callaghan, Dietitian at the School. Special lectures on food sanitation and health were given by Mr. L. E. Stewart, Chief Sanitary Inspector, Department of Health, Edmonton; Mr. Broomhall, Sanitary Inspector; and Dr. Rawlinson, Medical Officer of Health, Mountain View Health Unit, Didsbury. Miss Berneice MacFarlane, Supervisor of Home Economics and of School Dormitories, Department of Education, assisted in the discussions. A special session on "Living Together in the School Dormitory" was conducted by Miss Maimie Simpson, Dean of Women, University of Alberta.

Attendance from Alberta High School Dormitories was disappointing only two dormitories being represented. Four registrants were from Church Schools and two were school dormitory workers from Saskatchewan. Members of the School of Agriculture kitchen staff attended the special lectures on sanitation and health.

Girls' Food Clubs

Probably the most far reaching Food and Nutrition work is that with the Girls' Food Clubs. Seventy-two clubs, 15 taking food projects and 57 garden projects, studied the importance of good food to good health. Not only the girls themselves but their families and their communities benefit from what the girls learn and practice in these projects.

The Extension Nutritionist met all of these club leaders at the annual leaders' course, giving them suggestions for their club programs. Five leaders

were given individual assistance in planning their Food Club meetings.

Other Activities of the Extension Nutritionist

A total of 57 lectures and demonstrations on food and nutrition topics were given by the Extension Nutritionist, with a total attendance of 2,525. These included 18 adult short course programs, 4 lectures at Home and School meetings, 3 demonstrations to Indian groups, 3 cooking schools, 9 lectures to school groups, 5 to Girls' Clubs, 4 to students at schools of agriculture, and the remainder to other adult groups.

Correspondence has included replies to 61 requests specific information. The greatest number of requests, as in other years, has been for home canning and other food preservation problems. Other requests include those for advice on pressure cooking, special diet information, Canada approved flour and bread, baking problems, recipes, quantity cookery, meal planning and food budgeting. Numerous letters have been received from teachers and students for general information on food nutrition.

Three radio addresses were given by the Extension Nutritionist in 1952, and one radio interview. Twenty-one items were prepared for the Farm Notes.

Publications included revision of the leaflets "Facts and Figures for the Overweight" and "Use your Peas and Beans", and two new sections for the Girls' Club project books.

HOME DESIGNING

Remodelling

Farm home modernization and remodelling received concentrated attention this year, since the trend seems to be towards the improvement of present living accommodation. Extension of rural electrification and the ready supply of suitable building materials are, no doubt, factors.

This work was assisted greatly by the new Prairie Rural Housing Committee bulletin, "Farm House Remodelling", of which 1,140 copies were distributed upon request. The remodelling kit was sent to 153 home owners as a direct result of the interest aroused by the bulletin.

Slides were made of the illustrations in the bulletin and these were used at 17 lectures. The visual aids stimulated interest in remodelling, since they pictured clearly what could be done to improve an unattractive, poorly planned farm home.

Sixty-eight farm houses were visited and plans were made for the remodelling of the house, the interior and exterior color schemes, the purchase of new furnishings and equipment, and kitchen modernization.

The practice of taking "before" and "after" photographs of the transformation has been carried on whenever possible. These photographs should prove quite effective when an adequate collection has been made.

The Prairie Rural Housing Committee bulletin, "Farm Kitchens and Utility Rooms", was distributed to 800 rural home owners. This stimulated interest in kitchen planning, and 51 scale plans of suggested improvements were prepared and 30 blueprints of the step-saving U kitchen were sold.

Home Planning

The Prairie Rural Housing Committee bulletin, "Farm House Planning", was distributed to 1,700 people. The greater selection of farm house plans increased the number of blueprints sold this year to 53. Lectures (17) on farm house planning were held in the Camrose area, the Brooks area and at the School of Agriculture, Fairview.

Slides made of the illustrations in the Farm House Planning bulletin were used at these lectures, and the construction details were of particular interest to the prospective home builder.

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Home Furnishings and Equipment

Better buymanship in the field of home furnishings was stressed at 14 lectures. Samples of finishing materials were shown and an explanation of use, maintenance and cost was given.

Electrical wiring and equipment was discussed at the Rural Electrification Schools held in Stony Plain and Stettler.

Home Study Course

Ten groups representing 128 rural women took the Home Decoration - Study Course this year. Although not as widely distributed now as in the past, it has resulted in added interest in modernization, decorating, kitchen planning and home building, and the number of meetings and individual requests for help concerning rural housing has increased.

Other Activities

Seven newsletters on various phases of rural housing and interior decoration were distributed this year to a rural mailing list of 400.

Two radio talks were given, one concerning Home Safety, the other on the services of the Home Designing Office.

New illustrative material was prepared for lectures on remodelling, home planning and house construction. Samples of finishing materials for the interior of the home were gathered for demonstration purposes.

The Community Life Conferences sponsored by the University of Alberta occupied a part of the summer season. With the exception of the conference held at the School of Agriculture in Fairview, all others were cancelled due to poor attendance, illness and pressure of farm duties; time was spent preparing lectures, and due to the short notice of cancellation no other meetings could be arranged to fill in the time provided.

Future Projects

The first items to be handled in 1953 will be the completion of the bulletin on "Storage Space in the Home", and the display panels on "Ornament" and "What is Good Design" begun this year. The display panels will be used by the Home Economists as demonstration material with their lectures on "Good Design in the Home".

Slides of the illustrations in the P.R.H.C. bulletin, "Farm Kitchens and Utility Rooms", will be made for kitchen planning lectures and demonstrations.

DISTRICT HOME ECONOMISTS

Personnel as of December 31, 1952

Elizabeth M. Bartman, St. Paul	Mrs. Grace Melnyk, Vegreville
Mona M. Breton, Wetaskiwin	Priscilla Mewha, Calgary
Bertha Eggertson, Westlock	Lillian Popoff, Camrose
Lila Engberg, Lethbridge	Patricia Seldon, Grande Prairie
Margaret Fargey, Stettler	Lorraine Shatz, Hanna
Mrs. Norma Gray, Brooks	Margaret Smith, Red Deer
Shirly Holms, Wainwright	Ruth Whaley, Edmonton

Resignations

Helen Robinson, Stettler
Mary Smart, Lethbridge
Bernice Reed, Wainwright

Appointments

Margaret Fargey - Stettler

Mona Breton - Wetaskiwin
Shirley Holms - Wainwright

Transfers

Lila Engberg - School of Agriculture, Fairview, to Lethbridge

The District Home Economists report an extremely busy year with records showing a notable increase in all phases of the work and particularly in the attendance. A plan of work made in advance for the year, with assistance from the Supervisor, has done much to increase efficiency in the use of time. As a result, with the present number of staff members it is doubtful whether there can be any notable increase in the total amount of work done despite the fact that there are many requests for demonstrations and assistance which are postponed and cannot be met for several months.

Assistance from the Home Economists at the Schools of Agriculture during the summer is very limited. Only three of these eleven Home Economists had previous experience with this Service. Of the others, one took leave of absence and five resigned during the spring and summer.

CLOTHING AND HOME SEWING

Probably nothing contributes more to the morale of farm women than to have attractive yet economical clothes to wear. Assistance was given farm women to achieve this goal by stressing economy of home sewing, speedier methods, high standards of construction and better buymanship of materials and ready-made clothing.

One hundred and thirty-two sewing clinics were attended by 3,564 women and varied from 2 to 5 days with a total of 436 sessions. Pre-course meetings held a month in advance have resulted in much more successful clinics. In one district, several groups, having attended sewing clinics, modelled the garments they had made at a Women's Institute Constituency Conference and told what they had learned at their clinics. Several Home Economists report unfilled requests for sewing clinics and demonstrations on hand. Sixteen other clinics were held on sewing slip covers, draperies, etc. for the home, and at 22 meetings dress forms were made.

Lectures and demonstrations were given on related topics as follows: "Use and Care of the Sewing Machine", 31; "Selecting and Adjusting Patterns", "Sewing Can be Fun", "How to Dress", 93; "Choosing and Using New Textiles", 75; with a total attendance of 8,583. Also, 132 lectures and demonstrations on clothing and sewing were given to Girls' Clubs.

Seventy-one newspaper articles were prepared on topics related to clothing. Through home visits and office interviews, 1,051 individuals were assisted with sewing problems.

Home Economists continued to report that the standard as well as the quantity of home sewing is improving as evidenced at fairs and local displays. Women are becoming better informed in the buying of materials and in their choice of line and design of clothing for their families.

HOUSING

Since the business of building, remodelling and decorating of homes is quite a personal affair, it is pleasing to report increased demand for home visits and individual assistance. Five hundred and thirty-seven home visits were made and a total of 1,012 individuals were assisted in all areas of home improvements.

As last year, there was a call for aid in building new homes (86) and remodelling older homes (92). Fifty-seven kitchens and 23 living areas were completely replanned and decorated. The extension of rural electrification and the resulting convenience of electricity is greatly responsible for this inclination to improve present living standards. More rural people are coming to realize that it is possible to have modern electrical equipment and labour savers while they are still on the farm. It is hoped that this factor will help to curtail

the numbers of young people and retired farmers that leave the land to seek a more comfortable living in the city.

Fifty-seven prospective home builders sought advice about building materials and 180 people attended lectures on house planning. Inquiries regarding rural electrification (45), water systems (42) and heating (30) were increased from last year.

Ten groups (250 women) took the Home Study Course in Interior Decoration. This course has helped rural women to improve their homes and provide attractive surroundings for their families.

A total of 93 lectures were given to 3,194 people on the various topics of home planning, interior decoration, kitchen planning, rural electrification and buymanship of home equipment and household furnishings.

FOODS AND NUTRITION

Total number of lectures and demonstrations on food and nutrition topics: 258.

No.	Topics	Attendance
78	Food Preparation and Service	2,411
55	Food Preservation	1,390
5	Buymanship of Foods	95
29	Nutrition and Meal Planning	827
91	School Lunches	2,411

Forty-nine of the above were given at meetings of Girls' Food or Garden Clubs, with a total attendance of 892. Home Economists who are new to the Service must study the food habits and needs of the district before concentrating on this work.

Several of the older Home Economists emphasized the School Nutrition program. A total of 135 school visits were made for the purpose of observing the school lunch, giving suggestions and material to help teachers incorporate nutrition teaching into their school program, talking to the children about food and health, and helping with the organization of hot lunch programs. One Home Economist sent mimeographed suggestions for the school lunch box to approximately 300 parents. One hundred and eighty-five circulars letters dealt with the hot lunch program. Seventeen new lunch programs were organized, and many reports have been received indicating improvement in the quality of the children's lunches.

Cooking schools held in the Westlock, St. Paul and Edmonton districts proved very popular and other Home Economists are planning for similar programs in the future,

Two hundred and seventy-six home visits were made for the purpose of giving help with food or nutrition problems and food questions were introduced at numerous general home visits. Reports indicate individual assistance to 2,088 persons through interviews, phone calls, or letters. Many more individual problems were dealt with following meetings, at fairs or other public gatherings, or on the street and not recorded. Topics covered include child feeding: school lunches; lists of foods and recipes for special diets; canning, freezing, pickling and jelly making; use of rose hips; meal planning; quantity recipes; menu planning and food purchasing for camps, wedding receptions, church suppers and other group feeding projects. The claims of certain equipment salesman are frequently checked against information from this Branch with respect to the effect of aluminum cooking utensils on health. Information on the selection and use of the home freezer is very often the subject of inquiry.

The testing of frozen foods has continued at Brooks, 153 varieties of vegetables, 40 samples of meats and 6 of chicken being tested. Special attention has been given this year to the effectiveness of various types of wrapping. Comparative cost tests have been made to determine the desirability of buying fruit and processing it in the locker or buying commercial frozen fruit for locker storage.

Twenty-eight radio addresses given by District Home Economists dealt

with food and nutrition topics, and these resulted in further requests for information. The number of newspaper articles written by Home Economists this year has increased to 153.

GIRLS' CLUB WORK

The supervision of Girls' Clubs is carried on by the District Home Economists under the provincial program. Instruction is given in most phases of - homemaking - Foods, Clothing, Home Decorating, Gardening and Etiquette. In addition, the Home Economists guide the social and community work done by these clubs. An opportunity is provided for contact with the parents for many home visits.

In 1952 the District Home Economists gave assistance to 150 Girls' Clubs with a membership of 1,863. One hundred and thirty-nine achievement days - were held with 7,001 people in attendance, and at these judging was done by one or more Home Economists and provided a good opportunity to contact many adults.

District Home Economists assisted in the arrangements for and spoke at 6 field days, with an attendance of 1,178. 15 rallies with an attendance of - 1,423 and 56 tours with an attendance of 1,321. Also, a number of them assisted in supervision and instruction at the short courses, fair camps and Leaders' Courses held during the summer:

In many districts Leaders' Courses were held. In some cases these were attended by all Club Leaders in the district, and in other instances the District Home Economists visited the club leaders and gave direct assistance. Six district leaders' meetings were held and 80 local meetings with club leaders. District Home Economists gave 12 radio talks for 4-H clubs members. One hundred and eighty-six former club members were given assistance in homemaking, educational or vocational problems. On the average, 31% of the District Home Economists' time was spent on club work.

The teams of club members attending National Club Week and taking part in the Dominion competition were again very successful. For the fourth year in succession the Food and Clothing teams placed first. The Garden team, entering for the second time, also placed first. Much of the success of these teams is due to the work done with them by the Home Economists. In working with the clubs over a period of time the standards of these girls have been improved greatly. This is evident in all the clubs of which those going to National Club Week are cross-section.

HOME MANAGEMENT

An increase is reported in the number of lectures and demonstrations this year, 9,143 women having attended 22 lectures on "Time and Energy Savers"; 190 on "Buymanship and Care of Foods, Textiles, Equipment and Home Furnishings"; 5 on "Planning Expenditures"; and 16 on "Home Safety". Eighty-one newspaper articles were prepared on these topics and individual assistance given to 620 homemakers.

FAMILY RELATIONSHIP

Because one of the two Home Economists who specialized in this field resigned and the other was busy with other work, very little was accomplished this year. One lecture on "Building Happy Relationship" was attended by 26 persons, 50 individuals requested guidance with personal and family problems, and 8 newspaper articles were prepared.

HANDICRAFTS

The Home Economists continue to confine their handicraft work to types of practical and lasting value, such as rugmaking, leathercraft, textile painting, gift and bazaar suggestions. Priority is given other fields of service where assistance requested is of a more fundamental nature.

There were 164 demonstrations attended by 4,151, and 261 individuals

were assisted, 6 of whom earn their living from handicrafts. Through handicrafts many have made their homes more attractive and comfortable as well as finding a satisfying activity for evenings on the farm and ultimate old age.

OTHER DEMONSTRATIONS AND LECTURES

There were 55 demonstrations attended by 1,971 women and girls, 458 individuals assisted and 7 newspaper articles written on topics related to etiquette entertaining, table setting, special occasions and flower arrangement.

There were 154 general talks outlining the services of this Branch, as well as 70 dealing with Women's Work, 87 with Girls' Club Work and 46 on the School of Agriculture - the total attendance being 12,591. Specific information was given 1,556 persons.

SHORT COURSES, FIELD DAYS AND MEETINGS

District Home Economists lectured and demonstrated at 220 short courses and field days, 86 of them in co-operation with the District Agriculturists, 20 with Canada Department of Agriculture, 14 with the University Extension Service and 31 with Agricultural Service Boards. In addition, 50 meetings were at the request of other organizations such as Rural Health Units, Department of Indian Affairs, Canadian Association of Consumers, Department of Education, Exhibition and Fair Boards and Western Council of Beef Producers. Advice and assistance are also sought by local organizations such as School Boards, Fair Boards, Relief Services, Social Service Clubs, etc.

The Home Economists are called upon for assistance in arranging programs and entertainment at conventions of Provincial and National organizations, e.g. Provincial Seed Growers, Municipal District Convention, Provincial Beekeepers, Dairy Convention, Frozen Food Locker Association, Women's Institutes, Farm Women's Union of Alberta, Social Credit, and Home and School Association Conventions.

JUDGING AT FAIRS, CONVENTIONS AND CONFERENCES

District Home Economists judged at a total of 130 fairs, conventions and conferences as well as 139 achievement days. In addition, 33 additional judges were located for 23 fairs which Home Economists did not have time to attend or at which extra assistance was needed. "Standards for Judging" were discussed at 61 meetings. Assistance has been given several Fair Boards and other organizations in revising their prize lists but there remains considerable work to be done. The Home Economists report many comments on the value of our recent publication on "Standards for Judging Foods, Clothing and Handicrafts" in assisting homemakers to improve the quality of their exhibits and the educational value of fairs and similar events. Home Economists assisted in the organization of 14 fairs and prepared 15 exhibits at fairs and conventions.

RADIO, NEWSPAPER ARTICLES AND NEWSLETTERS

A total of 102 radio addresses were given on timely topics of interest to rural homemakers and girls. Fifty of these were given from Grande Prairie and the response indicates these were well received.

Four hundred and forty seven newspaper articles were prepared for 40 different local papers in the Home Economists' districts. Eleven of the Home Economists prepare regular weekly columns for local papers. To keep in closer touch with women's groups, the Home Economists have prepared 96 newsletters with a circulation of 4,819 containing timely information and announcements of new programs, services and publications.

D. P. DOMESTIC WORKERS FOR FARM HOMES

There were only 3 new arrivals this year and 6 domestics still under agreement. Only one of the new arrivals remains on a farm.

OTHER ACTIVITIES

The Home Economists assisted in scoring 31 farm families nominated to the Master Farm Family Award, and also assisted in the regional judging.

Considerable assistance was given 45 families entered in the Farm and Home Improvement competitions in the Edmonton and Westlock districts.

Summary of Activities, etc.

	1951	1952
Number of Demonstrations	2,047	2,138
Field Days and Short Courses	212	220
Attendance	80,928	95,087
Average Attendance	35.9	40.3
Judging at Fairs, Conventions	123	130
Radio Addresses	71	102
Publications distributed	70,235	89,913
Letter requesting information	13,342	15,415
Home visits	2,477	2,942
Girls' Clubs	140	151
Office interviews	2,925	3,814
Phone calls for information	7,157	7,807

REPORT OF THE VETERINARY SERVICES BRANCH

E. E. Ballantyne, V.S., D.V.M.	Director
J. G. O'Donoghue, V.S., D.V.M.	Extension Veterinarian
C. H. Bigland, V.S., D.V.M., D.V.P.H.	Veterinary Pathologist
G. S. Wilton, V.S., D.V.M.	Veterinary Pathologist
F. E. Graesser, B.S.A., V.S., D.V.M.	Micropathologist

GENERAL

The work of the Branch again increased as the following report shows, partly due to livestockmen and poultrymen realizing that profits in their enterprise depend on disease prevention and control, as well as the occurrence of foot and mouth disease in Saskatchewan and rabies in Alberta. The increasing dependance on scientific methods for accurate disease diagnosis as the basis for logical treatment resulted in more specimens being submitted to the laboratory for examination during the year. Dr. F. E. Graesser became micropathologist in April due to Dr. G. K. Weir entering private practice.

FOOT AND MOUTH DISEASE

On February 25, the disease was officially diagnosed in cattle and hogs near Regina. Altogether 42 premises were involved; infection was found in a total of 29 premises; 13 premises were classed as exposed and treated as though infected. The number of animals destroyed as a control measure was as follows: cattle, 1,343; swine, 293; sheep, 97; goats, 1; fowl, 2,372; eggs, 15,828.

As foot and mouth disease is the most contagious of animal diseases the control measures adopted by the Federal Health of Animals Division were thorough in all respects with the result that the outbreak was eradicated in record time.

The outbreak increased the work of this Branch considerably. Educational material was supplied to all District Agriculturists for distribution to livestockmen, meetings addressed, etc. so that livestockmen would be conversant with symptoms and result in early reporting of any cases. Fortunately, the disease did not appear in Alberta.

RABIES

This disease occurred for the first time in Alberta on June 8 when a rabid fox bit a trapper's dog at Ft. Fitzgerald, which later developed the disease. On June 26, a similar occurrence happened at the junction of the Slave and Peace Rivers. Early in July, the disease appeared in the Little Red River-Fifth Meridian area. On July 29, a wolf bit several pigs on a farm south-west of Ft. Vermilion. Two pigs died of the disease in two weeks and three more in September. This case was not reported until September when livestock on over 20 farms were bitten by rabid foxes or wolves. As of December 1, 20 cattle 13 hogs, 6 horses and considerable number of dogs had died of the disease in the Ft. Vermilion, Keg River, Carcajou and Paddle Prairie districts on 32 farms. Reports since then indicate several more deaths.

The 150 Forest Rangers and 1,800 registered trappers in the province were advised by this Branch of the presence of the disease, the symptoms etc. and asked to report suspicious cases. Depots of suitable containers for specimens were established at Forest Ranger Divisional centres at Lac La Biche, Athabasca, Slave Lake, Peace River and Grande Prairie. Through co-operation of the Rangers, a positive coyote head and fox head was received from Ft. McMurray in November and Margie early in December, respectively. This located the disease on the eastern part of the province, the latter centre being only 60 miles north of the margin of the main farming area at Lac La Biche. In December, a rabbit 10 miles north of Grimshaw was positive on examination. Other important specimens were received at the laboratory, the brains removed and shipped to the Animal Diseases Research Institute, Hull, Quebec, for official diagnosis.

Under the direction of the Department of Agriculture, the Department of Lands and Forests, through Forest Rangers, are carrying out a poisoning campaign around the infected settlements; along the McKenzie Highway; east and west of the Peace River and north along it; on base line 19 from Saskatchewan border to Calling Lake to protect the Lac La Biche-Athabasca area. Seven Rangers and seventeen hired trappers are working on this project. The purpose of the poisoning campaign is to reduce the fox and wolf population so that they will not have to migrate for food into the main farming district. This being the peak year of fox population, no doubt has contributed to the spread of rabies down from the N.W.T. The fact must be faced though that no country - yet has eradicated rabies where it is in wild animals and no doubt the disease will be a perpetual problem in some areas of Alberta, the seriousness paralleling the density of wild fox and wolf population.

T.B. RESTRICTED AREAS

In spite of staff of the Health of Animals Division being busy checking suspected foot and mouth cases for several weeks, 159,481 cattle were tested during the year. Several practising veterinarians helped considerably on a part-time basis. Six new Restricted Areas were established in 1952; namely, the M.D.'s of Bow Island No. 13, Paintearth No. 53, Serviceberry No. 43, Raven No. 57, and L.I.D.'s No. 50 and 139, making a total of 29 such areas in the province. Besides testing in the Restricted Areas, 8,564 cattle were tested as Advanced First General test in Municipal Districts, etc. that have been petitioned so that the owners could get compensation if reactors were found and to facilitate the movement of cattle.

Thirteen more M.D.'s and L.I.D.'s completed petitioning, leaving four M.D.'s and nine L.I.D.'s to be completed. There are very few cattle in the nine L.I.D.'s.

BRUCELLOSIS CONTROL

A. CALFHOOD VACCINATION PROGRAM

The adverse weather of the 1951 Fall and early Winter caused a carry over of several thousand calves into 1952 and with an open Fall this year, plus increased cattle holdings, the total number of calves vaccinated rose to 132,026. This was possible through the fine co-operation of the veterinarians, livestockmen and organized campaigns sponsored by the Department and Municipal authorities.

B. BRUCELLOSIS RESTRICTED AREAS

There are now nine municipalities operating as such areas, namely: Starland No. 47, Wainwright No. 61, Vermilion River No. 71, Beaver No. 73, - Strathcona No. 83, Pincher Creek No. 9, Athabasca No. 103, Minburn No. 72 and Camrose No. 63. The latter two were new for 1952. Several more Municipal Districts are interested in the program which calls for the vaccination of all heifer calves for several years.

C. DIAGNOSTIC SERVICE

The number of agglutination tests for the diagnosis of bovine brucellosis totalled 17,429, which was a reduction of approximately 7,000 from the 1951 total. This was not unexpected, as other laboratories in the past have shown the same reduction in blood testing when the calfhood vaccination program gets well underway. Our emphasis has been to promote vaccinations as providing the most value to the cattle industry, not blood testing. Again a high percentage of tests were made to find out if the milk was safe to drink, as cattlemen are anxious to protect their families from undulant fever.

The following graph shows the result of blood testing in the animal section of the laboratory.

BLOOD TESTS FOR BRUCELLOSIS (BANG'S DISEASE)

1952

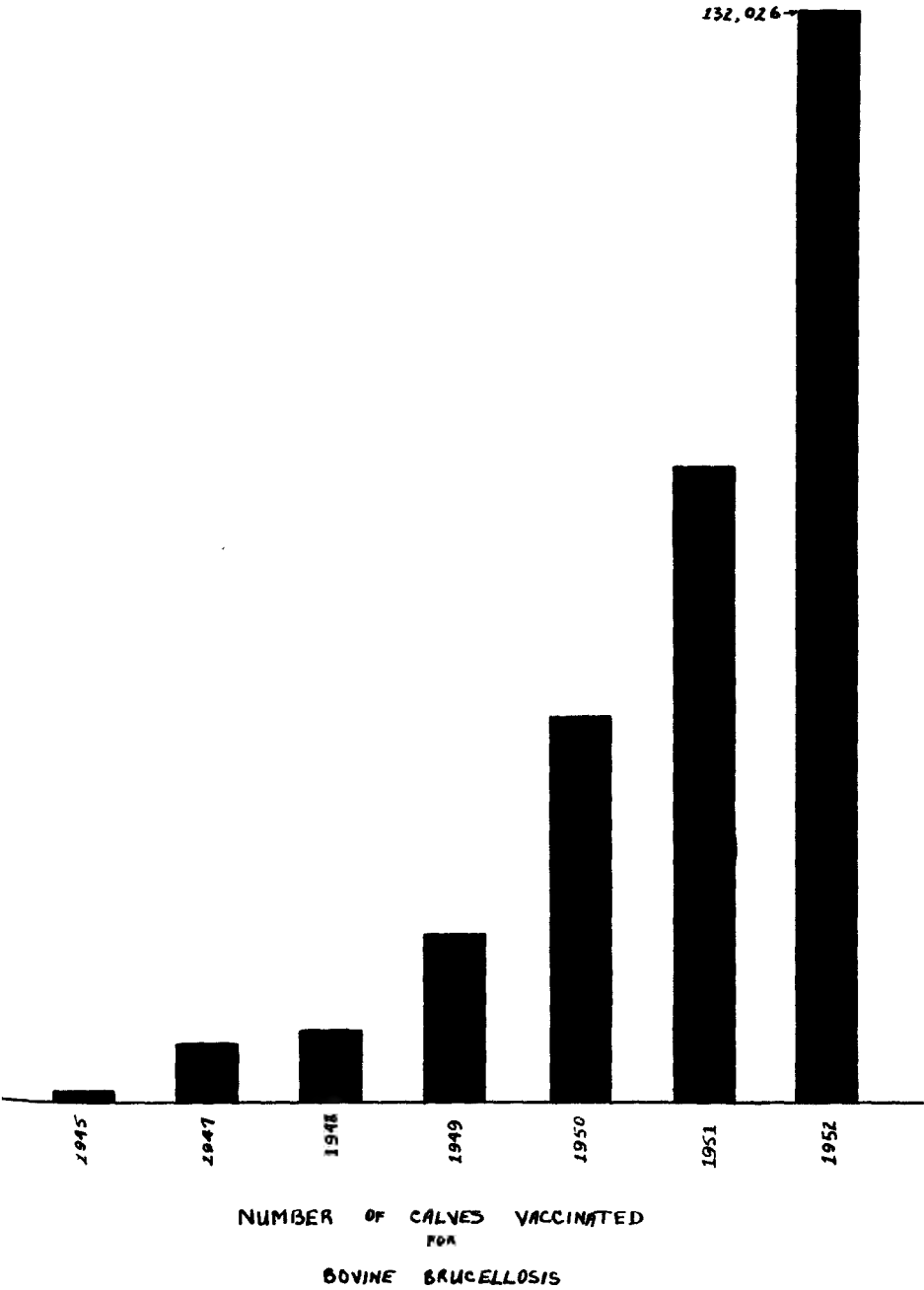
	Provincial Blood Tests	Percentage	Dominion Blood Tests	Percentage	Total Number	Percentage
Number Positive	1,724	10.0%	10	5.3%	1,734	9.9%
Number Suspicious	801	4.6%	12	6.3%	813	4.7%
Number Negative	14,644	85.0%	168	88.4%	14,812	85.0%
Number Broken or Hemolized	70	.4%	..	..	70	.4%
TOTAL NUMBER OF BLOOD SAMPLES . . .	17,239	100%	190	100%	17,429	100%

NUMBER OF HERDS 2,842

PERCENTAGE OF HERDS INSPECTED 21.3%

NO. OF MUNICIPAL DISTRICTS,

- LOCAL IMPROVEMENT DISTRICTS SERVICED . . . 76



D. EDUCATIONAL

Again a large number of meetings were addressed on brucellosis so that cattlemen will be conversant with the disease and the necessary preventative measures. Radio talks were given, articles written for livestock journals, and press releases issued. A large number of enquiries were answered and bulletins distributed.

Mention should be made that a concentrated publicity campaign was made through the press by providing 10 articles for the District Agriculturists to have printed in local papers.

SHIPPING FEVER OF CATTLE

Following reports of serious losses for the 1951-52 Fall and Winter, a survey was conducted among veterinarians and feeder associations. From the facts presented, a conservative estimate of a \$500,000 loss was made for that period. It has been reported that this disease complex has deterred many from operating feedlots.

As education is basic to preventing or controlling any disease, a bulletin entitled "Shipping Fever of Cattle" was published. Copies were distributed by the Extension Branch, brand inspectors and commission firms. This was in an effort to get better care of animals during shipment and better use of bacterins.

Anti-serum provides a passive immunity for two to three weeks; therefore theoretically, if feeders going through the stockyards were given serum there they would have a reasonable resistance to cover the period of shipping and becoming acclimatized in the feedlot. As serum had been supplied by the Federal Department of Agriculture in other provinces for feeder cattle with apparent good results, efforts were made to have the same supplied for Alberta. A limited amount was made available by the Federal Health of Animals Division for use at the Edmonton, Calgary and Lethbridge stockyards.

Losses have been reported in vaccinated stock in Southern Alberta due to *P. hemolytica*. This type of *Pasturella* bacteria is not incorporated in present bacterins. This strain has also been isolated several times at our laboratory in shipping fever cases.

T.B. IN HOGS AND POULTRY

During 1952, 1,182 hogs in 1,058 shipments to Edmonton and Calgary packing houses showed extensive lesions of tuberculosis. Of these, 271 were condemned and 59 rejected. The educational program of writing a letter to all owners outlining corrective management practices was continued. No marked improvement is likely to be noted until a penalty is imposed on those submitting tuberculosis infected hogs and poultry.

One encouraging fact is that the percentage of tuberculosis in poultry examined at the laboratory has dropped from 5.5% in 1951 to 4.2% in 1952.

EXTENSION SERVICES

The extension activities, under the direction of Dr. J. G. O'Donoghue, are varied including lectures at the University of Alberta, Schools of Agriculture, supervision of the health of Government herds, investigational trips, addressing various meetings, and supervision of various livestock disease control programs of the Department. The following is a brief report of these activities. - -

A. Investigational and Service Trips

Cattle	86
Sheep	2
Swine	32
Horses	3
Fur Animals	<u>13</u>
TOTAL	136

Meetings Addressed	103
Radio Talks	23

In July 1952, the Extension Veterinarian was a speaker at the Ontario Veterinary College Short Course, Guelph, Ontario. The subject was Alberta's Brucellosis Control Program which is the leading provincial program in Canada.

B. Health Programs

The following are brief reports on Departmental animal health programs not previously reported and remarks on a few investigations.

(1) Cattle

(a) Lungworms

Lungworms of cattle were not thought to be common in Alberta. The finding of one severely infected herd led to the investigation of three others, all of which had suffered severe losses in calves from this parasite during the last three years. There is little doubt but that it is more widespread than was formerly believed. It is easily controlled by correct sanitary practices.

(b) Mastitis Control Programs

Due to the lack of response the co-operative program designed for mastitis control in the Edmonton milk shed, has been all but discontinued. A survey taken on composite milk samples and the results checked by the individual sampling of five herds showed that the incidence of mastitis is high. It is unfortunate, that while mastitis control programs are effective, herd owners are unwilling to make full use of them. Successful mastitis control is dependent upon herd management and milking practices.

(c) Provincial Mastitis Program

This is a private agreement between the herd owner and his veterinarian. The necessary sampling vials and herd books are supplied by the Department and there is no charge for the examination of the milk samples at the Provincial Dairy Laboratory.

There were eleven herds under this program in 1952.

(2) Swine

The majority of the swine losses are the result of errors in feeding and management. Erysipelas is the most important infection disease of swine in Alberta.

The herds of origin of all swine going to the Royal Winter Fair were inspected for Rhinitis. All premises inspected were free of the disease.

(3) Horses

There were a number of cases of equine encephalomyelitis reported from the southern part of the province. It did not appear in epidemic proportions. Unfortunately, there were no cases confirmed by laboratory procedures.

(4) Fur Animals

There was a marked reduction in the disease losses on Alberta Fur Farms. There were seven distemper outbreaks in comparison to twenty-five in 1951. Improved ranching practices are reflected in fewer disease losses.

Alberta remains free of virus enteritis, a serious disease of mink prevalent in parts of Ontario.

(a) Distemper Vaccine Bank

The purpose of the bank is to maintain a readily available supply of mink distemper vaccine. It is supplied to ranchers at cost price. The Distemper Vaccine Assistance Plan has replaced the bank to a large extent. However, in 1952, 910 doses of vaccine were supplied to 5 ranchers who wished to vaccinate their mink as a preventative measure.

(b) Alberta Distemper Vaccine Assistance Plan

This program was formulated in 1950 at the request of the Alberta Fur Breeders. Distemper constitutes the greatest threat to Alberta fur farms and control measures are warranted for the protection of the industry. Ranchers may enroll in the program by making application to the Minister, the application to be accompanied by an assessment of five cents per head for every animal on the ranch as of July 1. The ranchers agree to maintain accepted standards of sanitation and disease control measures. The plan is in effect from September to August 31st of the following year and must be renewed yearly.

The Department of Agriculture agrees to supply free of charge, mink distemper vaccine for confirmed distemper outbreaks on the ranch of a subscriber. In addition vaccine is available at a 50% reduction of cost to any subscriber - within a definite dangerous area of the infected ranch.

During the period September 1, 1951 to August 31, 1952, 10,450 cc's or doses of distemper vaccine were distributed free and 1,990 cc's or doses were supplied on the 50% cost basis. From September 1, 1952, to December 31, 1952, 2,850 doses of vaccine were supplied.

(c) Autogenous Vaccine

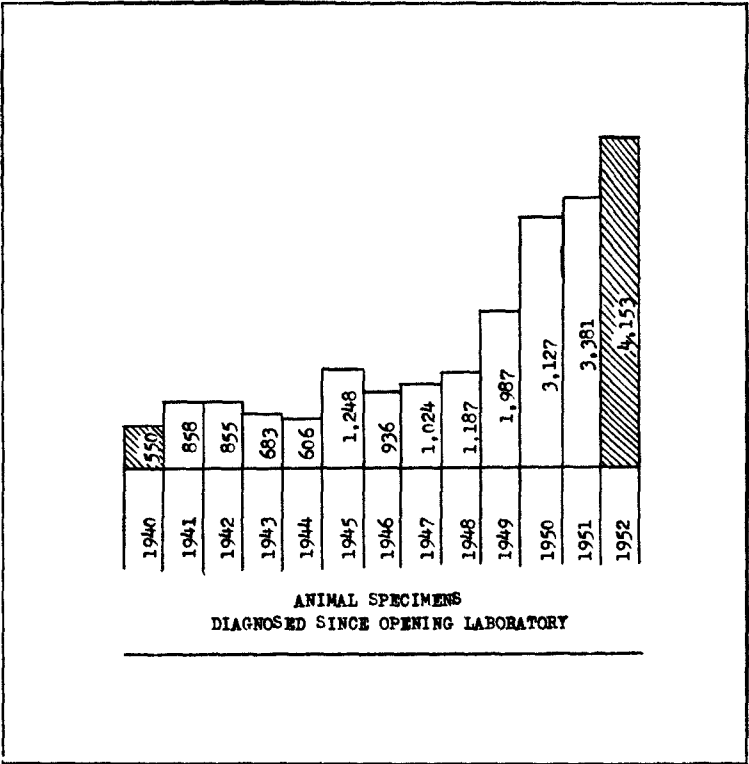
In distemper outbreaks it is the practice to supply autogenous vaccine produced from animals from the infected ranches. This is used following the inoculation of commercial vaccine. In 1952, 6,225 cc's were distributed.

REPORT OF THE VETERINARY LABORATORY

Again the number of specimens submitted for autopsy, microscopic and bacteriological examination has shown an increase, namely 22.8% and 20% in the animal and poultry disease sections respectively. In addition to the work as outlined in the following sectional reports, the laboratory activities also include the brucellosis testing and the distribution of the *Brucella abortus* vaccine and mink distemper vaccine reported in the sections dealing with the control programs relating to these diseases.

A.. THE ANIMAL DISEASE SECTION

The submissions made to this section of the laboratory under the direction of Dr. G. S. Wilton, continued to show an annual increase. There were 4,153 specimens examined in 1952 compared to 3,382 in 1951, an increase of 22.8 percent. The following graph shows the number of animal specimens examined each year since the laboratory was established. The extensive work - has been of great value to the veterinarian and the livestockman in providing an accurate diagnosis. This is important in reducing the great economic loss to the province and the individual owner from animal disease. Each animal - examined invariably saves the lives of many on that farm or provides information to prevent the losses again. A diagnosis also frequently affects a whole - community. Example of this would be the diagnosis of Bang's disease, blackleg, malignant oedema and many others. A study of the tables will reveal the variety and volume of work covered and that the majority of the specimens were - bovine and swine.



1952

SPECIES	LIVE	DEAD	PORTIONS	TOTALS
Beaver		1	1	2
Cattle	13	45	1031	1089
Cat	3	6	5	14
Chinchilla	5	43		48
Coyote		8	1	9
Deer			6	6
Dog	7	52	113	172
Elk			9	9
Fox	1	3	3	7
Goat		1		1
Horse			27	27
Leopard			5	5
Lynx			2	2
Marten		1		1
Mink	50	132		182
Monkey		3	3	6
Moose			43	43
Muskrat		3	3	6
Rabbit	14	299	11	324
Sheep	9	27	70	106
Swine	162	360	519	981
Wolf		2	2	4
Laboratory Animals	85	132		217
Blood Samples			65	65
Fecal Samples			38	38
Feed Samples			84	84
Milk Samples			517	517
Semen Samples			10	10
Urine Samples			43	43
Water Samples			67	67
Miscellaneous Specimens			68	68
TOTALS	349	1058	2746	4153

(1) LABORATORY ANIMALS

These animals were used to assist in making a diagnosis, to determine the pathogenicity of the bacteria isolated and for experimental work. They were carefully examined and cultured.

LABORATORY ANIMALS

Rabbits	10
Guinea Pigs	176
White Mice	17
Ferrets	<u>14</u>
TOTAL	217

(2) BIOLOGICAL PRODUCTS

Autogenous bacterins and vaccines have been prepared at times throughout the year to help fight certain disease outbreaks in livestock. The table below lists the products, the amount, the species of animal involved and the disease.

PRODUCT	AMT. IN CC'S	SPECIES OF ANIMAL	DISEASE
Aut. bovine wart vaccine	600	Bovine	Bovine Papillomatosis
Aut. canine wart vaccine	130	Canine	Canine Papillomatosis
Aut. mixed bacterin	2000	Porcine	Pasteurellosis
Aut. mink distemper vaccine	9875	Mink	Distemper

(3) POISONS

The Provincial Analyst J. A. Kelso and his associate C. E. Noble, have examined 531 specimens for the animal disease section of the Veterinary Laboratory the past year. Many cases of poisoning were found, which proves that the possibility of some form of poisoning must not be overlooked. The different forms can be listed as arsenic, creosote, lead, nitrate, sodium chlorate, strychnine, petroleum, water hemlock, tall larkspur, ergot and algae poisoning. The species of animals affected have been cattle, horses, sheep, swine, cats and dogs.

(4) NUTRITIONAL DISEASES

Nutritional diseases cause heavy losses in the province each year. Infectious disease often sets in after an animal's resistance has been lowered due to poor management and poor nutrition. Such being the case one cannot over-stress the necessity of proper feeding. The husbandman stresses good nutrition and the veterinarian is continually recommending minerals and vitamins to prevent and treat many nutritional diseases but the losses are still heavy.

We found 80 swine specimens suffering from anemia in the submissions made during the past year. Rickets were found in 34 swine, 5 mink, 1 lynx and 1 cattle beast. A Vitamin "B" deficiency was found in a large number of swine and mink specimens. A Vitamin "A" deficiency was found in 48 swine, 8 sheep, 2 cattle and 2 mink. Nutritional anemia resulting from the failure to include liver in the ration of mink was also quite common.

(5) MASTITIS

517 milk samples have been received from practicing veterinarians from acute cases of Mastitis in addition to the milk samples forwarded to the Dairy Laboratory under the Department's Mastitis Programs.

MASTITIS TABLE

Hemolytic staphylococci	69
Hemolytic streptococci	129
Hemolytic colon	24
Corynebacterium	6
Pasteurella	1
Negative	<u>288</u>
TOTAL	517

(6) SWINE BALANTIDIASIS

This is a protozoan disease and as well as causing disease in swine it is recognized as an important pathogen in man. It was responsible for heavy losses on a large well planned hogery in the central area of the province last spring. Balantidium coli has a relatively wide distribution wherever swine are found, especially in warm climates, but it is the first time that the parasitic infestation was sufficiently heavy to cause disease in this province to the best of our knowledge.

The owner had lost approximately 100 pigs over a period of 3 - 4 months. The condition occurred after the pigs were removed from the farrowing pen after weaning to the feeding barn. They became sick about one week after they were

placed in this barn. The barn was heated with forced hot air and there was no evidence of excess moisture due to the ventilating system. The floors were concrete, felt warm and construction was such that it could be kept clean. The one poor feature in construction was that a gutter ran along the centre alley for draining fluids.

The pigs became gaunt and would huddle but the most predominant symptom was a bloody diarrhea which was fairly viscid with mucous. There were a few deaths every day.

Five live and one dead affected pigs were received at the laboratory for examination. The predominant lesion noted in all pigs was an acute hemorrhagic inflammation of the intestine. The colon was acutely inflamed and in some cases small abscesses were noted in its wall. Some pigs revealed a necrosis of the colon. Smears from the intestinal tract of all pigs revealed a very heavy concentration of the protozoa, *Balantidium coli*. Extensive culturing failed to isolate anything other than *Pasteurella bacteria* which post mortem findings would indicate was a secondary infection.

Scrapings and intestinal contents from the affected pigs were fed to one healthy pig and placed in with two additional healthy pigs of about 2 months of age. The pig that received the drench became sick and died and the other two pigs also became affected with the disease. One sick pig finally recovered after being removed from that stall and treated.

Experiments with five groups of sick pigs on the farm with various drugs showed that aureomycin in the feed gave the best results. In our opinion, some factor prior to weaning lowered the resistance of the pigs, making them susceptible to infestation when moved to the growing pens.

(7) NECROBACILLOSIS IN MINK

Actinomyces necrophorus infection causes a wide variety of disease conditions in horses, cattle, sheep and swine. For instance it is the causative organism of calf diphtheria and foot rot in cattle and sheep. The necrophorous bacillus is also found in the lesion of necrotic enteritis in swine. It was found responsible for heavy losses in one mink ranch for the first time in this province the past summer. Over 30 animals died and of those 20 mink were examined at the laboratory during a period extending from September 8th to October 24th. The majority of the casualties were Aleutians and Sapphires. Both kits and adults were affected. Some of the animals showed extensive lesions in the thoracic cavity while others revealed necrophorous lesions in the liver often resulting in a peritonitis. When the thoracic cavity was involved it was usually full of pus and exudate and the lungs were abscessed or revealed necrophorous lesions. Direct smear from the pleural fluid or lesions from the lungs revealed long beaded, non branching filaments of *Actinomyces necrophorus*. The same was found when smears were made from the liver lesions or from the fluid in the peritoneal cavity in the cases of peritonitis.

A visit was made to the farm and it was found that the animals had been chewing their feed boxes and the construction of the feed boxes were such that they were difficult to clean and food became lodged. Some of the old food material was removed and placed in broth and incubated anaerobically at room temperature for 10 days. At the end of that time smears were made from the broth and *Actinomyces necrophorus* filaments were noted. Some of the broth was injected subcutaneously into a rabbit. An abscess occurred and smears again revealed the necrophorous bacilli.

(8) ECHINOCOCCUS GRANULOSUS

Echinococcus granulosus is a world wide parasitic disease of public health significance.

During a two month period in the fall, four specimens of wild animals were received for examination. Two moose from the vicinity of Entrance, one moose from the James River district and one deer from a little north of Whitecourt were affected with the hydatid or echinococcus cysts. A report was also received that a hog from the Turner Valley district was affected. The cysts are mainly found in the lungs and/or liver.

(9) LISTERELLOSIS IN CHINCHILLA

During the past summer the organism was isolated from three chinchillas from two ranches. The first specimen was submitted on August 11th. On post-mortem multiple pin-point foci of necrosis were noted in both the liver and spleen. Small foci of necrosis were found in the wall of the stomach and the wall of the colon. The areas of necrosis in the spleen, liver and intestine were cultured and a heavy growth appeared on the plates in 36 hours.

The second animal from the same ranch was submitted on August 23rd. On post-mortem the liver again showed multiple pin-point areas of necrosis and small foci of necrosis were also found in the wall of the stomach.

An animal from another ranch from another part of the province was submitted on November 23rd. The lesions in the liver and intestines were identical and *Listeria monocytogenes* was isolated with ease.

Until recently the isolation of this organism in Canada was quite rare and due to the fact that it affects many animals both wild and domesticated as well as man, it is an infection of public health importance.

(10) TULAREMIA IN MONKEYS

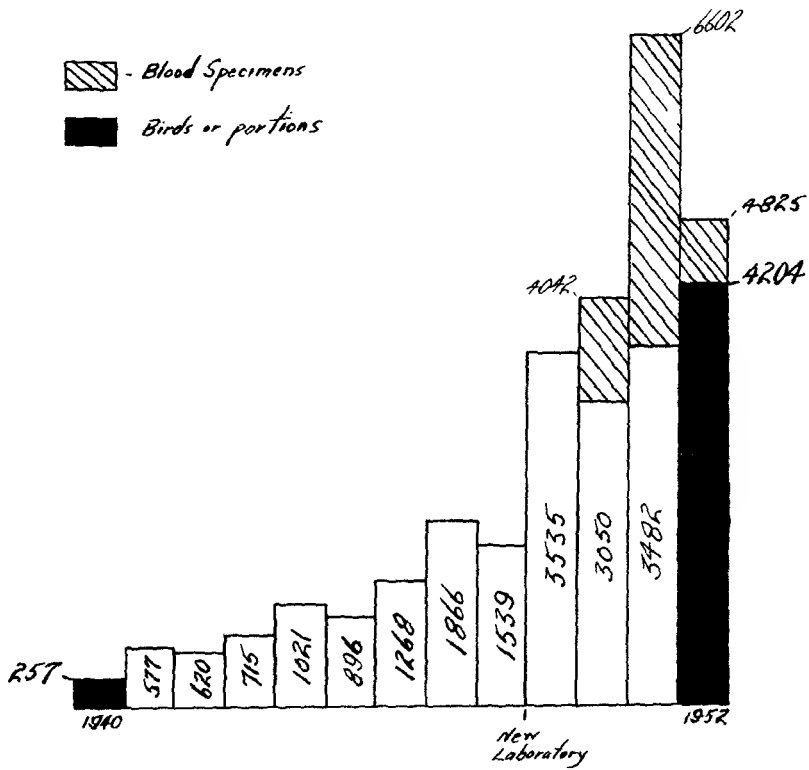
Pasteurella tularensis was isolated from two monkeys from a city Zoo in the province during the summer. A blood test from the third monkey from the same cage gave a positive reaction also suggesting infection. It is interesting to note that blood tests of attendants revealed that they were carrying antibodies for the disease.

B. POULTRY DISEASE SECTION

The primary purpose of this section, under the direction of Dr. C. H. Bigland, is the accurate diagnosis of diseases of poultry submitted by veterinarians, poultrymen, farmers and other interested parties. Accurate diagnosis is the foundation stone of effective treatment and control of poultry diseases. To further such treatment and control, the diagnosis must be both accurate and the recommended information must be given to the owner or his agent in the shortest possible time. Every effort is put forward to combine the speed and accuracy necessary to the saving of many thousands of dollars for Alberta farmers and poultrymen.

Appreciation and the confidence of poultrymen and farmers in accurate diagnosis was exemplified in a further increase in specimens received during 1952. The actual number of live and dead birds and portions examined rose to 4,204 in 1952 -- an increase of 723 or approximately 20% over 1951. The farms serviced rose from 1,343 in 1951 to 1,862 in 1952 -- an increase of 459 or approximately 34%.

The following graph illustrates the increasing number of poultry specimens examined since the Alberta Veterinary Laboratory started in 1940 -- 12 years ago. It may be noted that the number of poultry blood samples decreased this year. This is due to a shift of emphasis from the field collection of blood samples to the collection of blood samples from live birds submitted to the laboratory -- these not shown separately as they are represented as part of the examination of the specimen as a whole.



*Poultry Disease Specimens
Diagnosed Since 1940*

The increase in specimens and submissions is not believed due to an increase in poultry disease in Alberta. Rather, it is due to greater confidence and appreciation of a rapid and accurate diagnosis to offset losses that in previous years would be looked upon as inevitable.

Over 140 primary disease conditions were diagnosed in this section during 1952. To separate one disease condition from another and ensure accuracy, a careful post-mortem examination must be accompanied by bacteriological, serological, micropathological, parasitological, fungus and chemical studies when necessary.

(1) NEWCASTLE DISEASE

Newcastle disease was not very prevalent in Alberta during 1952. Only eight confirmed cases coming to our attention as compared with 63 flocks destroyed last year by the Dominion Health of Animals Division because of this infection.

During 1952, the use of a live virus vaccine (Blacksburg strain) was permitted in Canada; arrangements were made to supply this vaccine to Alberta poultrymen through the Alberta Veterinary Laboratory. However, no applications were received for the vaccine. The same program is being extended into 1953 and it is thought that some broiler producers may be availing themselves of this source of live virus vaccine.

(2) INFECTIOUS BRONCHITIS

Infectious Bronchitis was again diagnosed in a number of chicks, notably from broiler plants. This disease is especially hazardous to broiler raisers due to the mortality and the stunting effect on chicks affected with this condition.

A blood survey was conducted this year to ascertain how wide-spread this condition is in Alberta flocks. To date, all reports have not been received but the tentative results indicate that this condition is fairly widespread in Alberta chicken flocks.

(3) CHRONIC RESPIRATORY DISEASE

This condition affecting both chickens and turkeys has been found in several chicken and turkey flocks. Information of the disease as a whole is scanty and research work in the United States and Eastern Canada is being followed closely so that the findings can be applied to Alberta conditions.

(4) AVIAN TUBERCULOSIS

This disease is still costing Alberta poultry and hog raisers many thousands of dollars. An indication of this is given in that 178 specimens were found to be suffering from tuberculosis. Chickens, turkeys, pheasants, pigeons and grouse were affected.

The educational campaign to acquaint poultry and hog raisers with tuberculosis and its control is still continuing by letter, pamphlets, radio talks and information given at meetings and short courses.

(5) PARATYPHOID INFECTIONS (Salmonellosis)

This disease caused the loss of thousands of dollars through the death and retarded growth of poults and chicks this year in Alberta. Paratyphoid organisms were isolated from 361 poults, chicks, goslings, pheasants and canaries from 131 different farms. This condition is now considered to be one of the greatest hazards faced by Alberta turkey raisers.

Because control measures are based on the types of organisms encountered and because of the danger to humans, each isolation was submitted to the Provincial Public Health Laboratory for typing.

The following table gives the types found this year from poultry. Many of the same types being isolated from humans in Alberta.

SALMONELLA TABLE

TYPE	NUMBER
S. oranienburg	17
S. typhimurium	72
S. barielly	15
S. anatum	1
S. newport	6
S. bredney	2
S. tennessee	2
S. heidelberg	4
S. worthington	1
S. san-diego	2
S. thompson	3
S. enteritidis	1
S. being typed	<u>5</u>
	131

(6) PULLORUM

Salmonella pullorum was isolated from 423 chicks, poults and pheasants in 1952. These originated from 120 different farms. Cultures from each pullorum flock were submitted to the Ontario Agricultural College for typing. Out of 120 cultures submitted 68 were standard; 11 Intermediate; 39 Variant and 2 not typed.

The whole blood testing for pullorum of birds producing hatching eggs is carried out by the Alberta Poultry Branch and is highly instrumental in the control of this disease in Alberta.

(7) POULTRY EXTENSION

Information of poultry diseases was given in three radio addresses and talks at seven meetings of producer groups. The annual Short Course was held for Alberta Hatcherymen. A Poultry Refresher course for Veterinarians was also held. The Western Hatcherymen's Association convention in Banff was attended for the purpose of serving on the Health Fact Finding Committee.

(8) SCIENTIFIC ARTICLES

One paper was published in collaboration with two representatives of the human medical fraternity. The title "Newcastle Disease of Poultry in a Human of Field Origin", published in the Canadian Medical Journal.

(9) PROJECTS OTHER THAN POULTRY DIAGNOSIS

In the course of examining many thousands of birds, many conditions and problems are encountered that are in need of research to further knowledge of control, treatment and diagnosis. Since little time is left for such research at this laboratory, we have tried to further knowledge by submitting material to other laboratories for this purpose. Such material includes statistical information; Pasteurella, Salmonella, Listeria and Pullorum cultures; blood serum samples, parasites and specimens for virus work.

A brief experiment on the penetration of eggs by Salmonella organisms was completed. The results of this is now in the hands of the publishers and it is hoped will point towards methods of control of the steadily increasing incidence of Paratyphoid infection.

Cultures of avian tuberculosis organisms are still being collected together with blood sera of tuberculous birds in the hope that the knowledge of a whole blood test for avian tuberculosis will be furthered. No time was found to do other work on this project in 1952.

(10) POULTRY DISEASE CONDITIONS

The submission of poultry specimens is the heaviest during the Spring and early Summer months, paralleling the period of early growth on the farms. For example, 831, 805, and 928 specimens were received in March, April and May respectively.

One hundred and thirty-nine different diseases or conditions were diagnosed during the year. Most of these were routine, but paratyphoid, typhoid and pullorum showed an increase. Newcastle Disease was greatly reduced but infectious bronchitis and chronic respiratory disease appeared to a limited extent.

Regarding paratyphoid, which is both a veterinary and public health problem, a survey was conducted during 1952 among those who had suffered losses as per laboratory diagnosis. The following are some of the facts revealed indicating the serious economic losses. The records on 12,813 poult indicate an average loss of 31.7%. In some cases it was much higher, even up to 100%. One man lost 1,100 out of 1,500. The records covering 5,826 chickens gave an average mortality of 31.8%. Due to the seriousness of the disease research was instituted by the Federal Division of Animal Pathology to develop means of reducing the incidence of the disease on a preventative basis.

SPECIMEN		TABLE		
SPECIES	LIVE	DEAD	PORTION	TOTAL
Chickens	962	1352	70	2384
Turkeys	251	1143	20	1414
Egg Samples			59	59
Feed Samples			77	77
Water Samples			17	17
Goose		8	1	9
Pheasant	5	71	1	77
Duck	3	21	3	27
Pigeon	1	11		12
Budgerigars	2	8	2	12
Grouse		36		36
Partridge	1	16		17
Canaries	1	7		8
Ptarmigan		4	1	5
Swan			1	1
Peacock		1		1
Hoot Owl	1	1		2
Goshawk		1		1
Raven		1		1
Blue Herron		1		1
Blood Slides			17	17
Miscellaneous			26	26
TOTALS	1227	2682	295	4204
BLOOD SERUM				621
GRAND TOTAL				4825

C. MICROPATHOLOGY SECTION

1. Histopathological Service

This section of the laboratory, under the direction of Dr. F. E. Graesser, is concerned chiefly with the preparation and interpretation of sections obtained

from tissues of the various species of domestic animals and poultry. By working in close co-operation with the Animal and Poultry Pathology sections, a valuable and necessary service is accomplished in contributing to the establishment of accurate diagnosis of disease in all classes of livestock. A histopathological examination is particularly indicated in conditions where no gross pathological lesions are observed, and is of special value in the diagnosis of certain virus diseases, such as distemper in mink, rabies, and infectious hepatitis, as well as in the identification and classification of the many types of tumors.

While the majority of the tissues are received from the Poultry and Animal Pathology sections of the laboratory, a considerable number of submissions are sent in from veterinarians and marked for histopathological examination. A detailed report on our observations is returned in each case. Sections were made from 600 tissues received during the year. The accompanying table shows the species of origin and types of tissue examined. It will be noted that there is a decrease in the number of examinations made in comparison with those of the previous year's report. This may be accounted for as follows:

- (1) Following the resignation of Dr. G.K. Weir in February, 1952, a period of almost two months elapsed before the position he vacated was filled.
- (2) During the absence of the Animal and Poultry Pathologists on vacation, the services they provided were maintained by the Micropathologist. As a result, the work of this department was considerable curtailed for a period of six weeks.
- (3) Owing to the low incidence of distemper in mink this past year, fewer bladders were received for examination. The previous year these accounted for a large percentage of the total sections examined.

2. Preparation of Material for Extension Work

The need for a series of lantern slides and transparencies covering the various aspects of the common diseases affecting domestic animals and poultry has long been felt. These are of particular value in illustrating talks at farmers' meetings and supplementing the various short-courses which are put on by this Branch. For this reason, a photographic service has been provided, the aim of which is to produce as complete a series of slides as possible on the conditions affecting domestic and fur-bearing animals and poultry. This service covers only subjects of a technical nature, where it is beneficial to have a veterinarian take the pictures in order that the important features of the subject may be emphasized. A photographic darkroom has been equipped in order that work of an immediate nature may be carried out. The acquisition of a photo-micrographic camera attachment makes it possible to take pictures of sections or parasites through a microscope, thereby widening the usefulness of this service. A total of 265 colour slides, 41 black and white slides, and 49 black and white prints were produced by this section during the year.

In addition to the above, 9 animal and poultry specimens were prepared and mounted in plastic boxes for display and educational purposes. These include 4 rat specimens mounted for the Field Crops Branch to aid in the Rat Control Campaign.

ORIGIN OF TISSUE SECTIONS

TISSUES	Canine	Bovine	Equine	Ovine	Porcine	Fur-Bearing Animals	Poultry	Rodent	Miscellaneous	TOTALS
Adrenal Gland							2	1		3
Bladder (Urinary)	24	3				129				156
Bladder (Gall)	5									5
Heart	1	1					2			4
Intestine	1	4				1	6		1	13
Kidney	20	13			10	13	13	4		73
Liver	35	22		1	16	11	20	6	1	112
Lung	6	5				2	3	3		19
Lymph Gland	2	2			3					7
Mammary Gland	1	2								3
Muscle		5		1	2	1	3		4	16
Neoplasms	29	16	3		1	6	17		2	74
Nervous System	16	8	1	1	5	21	6			58
Pancreas	1									1
Proventriculus							2			2
Reproductive System			1	1			2			4
Skin							3			3
Spleen	15	3			1	4	13	4	2	42
Thyroid	1									1
Tonsil	3									3
Ureter		1								1
TOTALS	160	85	5	4	38	188	92	18	10	600

	Beaver	Cat	Cattle	Chinchilla	Coyote	Deer	Dog	Elk	Fox	Horse	Leopard	Lynx	Monkey	Moose	Mink	Muskkrat	Rabbit	Sheep	Swine	Wolf	TOTAL
															1						1
Eczema																					1
Emaciation			1											1							2
Encephalitis			1				2			1											4
Equine Encephalomyelitis										2											2
Echinococcus Granulosus					1									3							2
Enterotoxemia																		7			7
Ergot Poisoning			3																		3
Erysipelas																			66		66
Fatty Metamorphosis			2																		2
Fatty Degeneration of Liver			2																1		3
Food Poisoning													2	42			1				45
Foot Rot			3																		3
Feline Enteritis	6																				6
Fracture																			1		1
Gangrene													1								1
Gastritis & Enteritis			19	11		5							1	2	1		46	2	113		199
Giardia				1																	1
Gonorrhea			1															1			2
Heat Stroke																			1		1
Hemolytic Colon Infection			1															1	14		16
Hemolytic Streptococci Infection			11	2		5			3				4			7			8	1	41
Hernia													1						2		3
Impaction			1	3																	4
Improperly Bled			1																1		2
Infectious Canine Hepatitis						6															6
Injury													1						2		3

	Beaver	Cat	Cattle	Chinchilla	Coyote	Deer	Dog	Elk	Fox	Horse	Leopard	Lynx	Monkey	Moose	Mink	Muskrat	Rabbit	Sheep	Swine	Wolf	TOTAL
Pneumonia			26	8			3								4		1	4	44		90
Positive Pregnancy Tests										6											6
Pseudomonas Infection			1	3																	4
Pulmonary Emphysema			4																		4
Rabies					1		2		5			1								1	10
Rhinitis																			8		8
Rickets			1									1			5				35		42
Salmonella Infection															1	1		5			6
Sarcosporidiosis																1		1			2
Scours			8														2	2	51		61
Septicemia			2				1										1	1			4
Slobbers				2																	2
Sodium Chlorate Poisoning			1																		1
Sterility			4																		4
Stiff Lamb Disease																		2			2
Strychnine Poisoning	1						23														24
Swamp Fever										5											5
Swine Influenza																			2		2
Tonsillitis							1														1
Toxemia			11	1			3			1									4		20
Traumatic Reticulitis			2																		2
Tuberculosis													1						5		6
Tularemia													2				1				3
Tumour (Benign)			13	1	1		25												1		41
Tumour (Malignant)			7	2	1		9								2						21
Urinary Calculi			2												8						10

	Beaver	Cat	Cattle	Chinchilla	Coyote	Deer	Dog	Elk	Fox	Horse	Leopard	Lynx	Monkey	Moose	Mink	Muskrat	Rabbit	Sheep	Swine	Wolf	TOTAL
Vaginitis			1				1								2		4	8	49		2
Vitamin A Deficiency			2	1											9				2		66
Vitamin B Deficiency																					11
Winter Dysentery			6																		6
Miscellaneous	1	1	10	2			5			4			2	2	4		27	10	4		58
No evidence of disease or putrid		2	272	2			10		1	9					4		44	30			388
TOTALS	1	11	904	44	5	1	128	1	7	33	1	2	8	15	186	3	251	76	759	3	2439

AREA SERVICED BY ANIMAL DISEASE SECTION

The following map shows the areas and farms serviced by the Animal Disease Laboratory during the year.

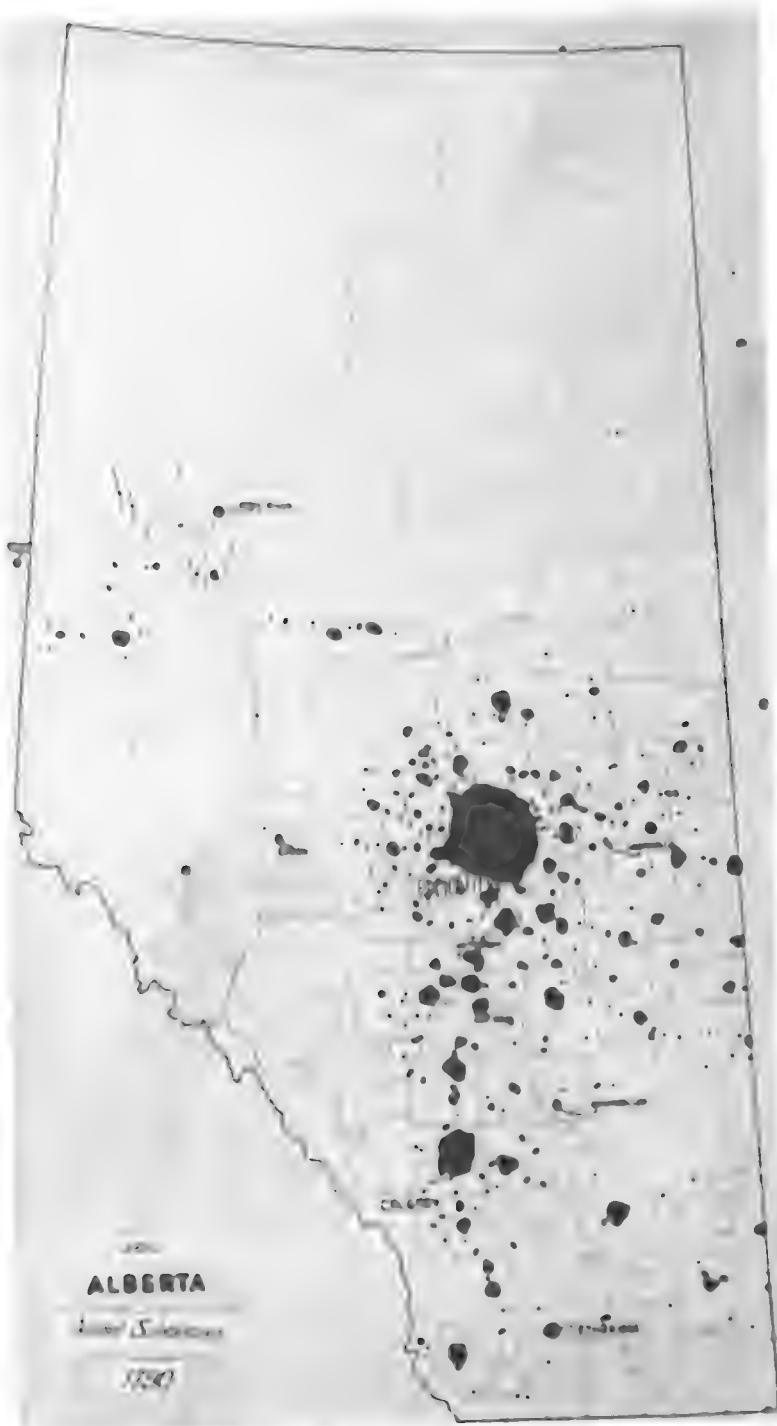


Table I - DOMESTIC ANIMALS
ORIGIN OF TISSUES

CONDITIONS																						TOTALS
Adrenal Gland	Bladder Urinary	Bladder Gall	Heart	Intestine	Kidney	Liver	Lung	Lymph Gland	Mammary Gland	Muscle	Mucous Membrane	Nervous System	Pancreas	Reproductive System	Skin	Spleen	Thyroid	Tonsil	Eye			
Abcess					1	1						1				1				4		
Cystic					2	1														3		
Congestion					2	4	5	1								10				22		
Degeneration			1		6	21	1	1		2		1	1			2				36		
Distemper	15																			15		
Cloudy Swelling			1		5	8			1											15		
Encephalitis												4								4		
Fatty Infiltration								3												3		
Fibrosis					4	2	1									3				10		
Infectious Canine																						
Hepatitis						7														7		
Inflammation	1	2		4		1	1	3						1				1		14		
Necrosis					8	13	1									1				23		
N. V. L.	1	14	3	1	3	6	1			1		25		1		1	1	1		58		
Pneumonia							4													4		
Putrid			1		1	2	1		1	3		2								11		
Neoplasma					1	5	6		2	1	4			5	27	4	1	1	2	59		
Rabies												3								3		
Sarcosporidiosis									1											1		
Toxaemia																				1		
Nephritis					8															8		
TOTALS	1	30	5	3	5	40	72	21	6	7	8	4		36	1	7	27	22	1	3	2	301

Table 2 - POULTRY
ORIGIN OF TISSUE SECTIONS

CONDITIONS	Adrenal Glands	Connective Tissue	Epithel	Intestine	Kidney	Liver	Lung	Heart	Muscle	Nervous System	Reproductive System	Skin	Proventriculus	Spleen	TOTALS
Congestion							1	1						1	3
Cloudy Swelling					2										2
Degeneration					4	3		1	2					1	11
Fatty Infiltration						1								1	2
Fibrosis					1	1									2
Hypertrophy												2			2
Inflammation				2		1									3
Leucosis				2		9				1			1	7	20
Meningitis										1					1
Necrosis					4	5									9
Neoplasms		3	2	2	1	2	1			2	4				17
N. V. L.	2				3	5				3	1		1	3	18
Sarcosporidiosis									1						1
Ulceration				1											1
TOTALS	2	3	2	7	15	27	2	2	3	7	5	2	2	13	92

Table 3 - FUR-BEARING ANIMALS
ORIGIN OF TISSUE SECTIONS

CONDITIONS	Bladders	Connective Tissue	Kidney	Liver	Lung	Muscle	Nervous System	I ntestine	Spleen	TOTALS
Cloudy Swelling			4	2						6
Congestion				1	1				3	5
Degeneration			7	4						11
Distemper	27									27
Encephalitis							2			2
Fatty Infiltration				1						1
Inflammation					1			1		2
Necrosis				2	2					4
Neoplasms		2	1	1	1				1	6
Nephritis			1							1
N.V.L.	101		3				10		1	115
Putrid	1									1
Rabies							6			6
Sarcosporidiosis						1				1
TOTALS	129	2	16	11	5	1	18	1	5	188

Table 4 - MISCELLANEOUS SPECIES *

CONDITIONS	Liver	Lung	Kidney	Nervous System	Muscle	Reproductive System	Spleen	TOTALS
Abscess	1							2
Cysts	1	1						2
Congestion							1	1
Degeneration	2	2	2			1	2	9
Necrosis	1						1	2
Neoplasms						1		1
Rabies				3				3
Sarcosporidiosis					2			2
TOTALS	5	3	2	3	2	2	4	21

* Includes buffalo, moose, guinea pigs, mice.

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M.D., I.D. or Spec. Ar.	Total No. of Premises	Total No. of Infected Premises	Total No. of Cattle	Positive	Suspicious	Negative
2.	3	-	13	-	-	13
3.	3	1	4	1	2	1
4.	25	3	150	33	15	102
5.	46	6	105	6	4	95
6.	1	-	7	-	1	6
9.	35	9	80	16	5	57(2 hem.
10.	1	1	3	1	-	2
11.	11	6	34	13	1	20
13.	3	1	29	1	-	28
14.	9	-	19	-	1	18
15.	106	19	410	23	12	366(9 hem.
16.	14	5	51	8	1	42
22.	2	2	163	6	8	149
23.	20	5	61	11	-	50 (2 brk.
25.	119	22	633	52	26	552(1 hem.
26.	84	15	311	30	9	268(4 hem.
28.	52	11	142	22	6	112(2 hem.
29.	26	3	174	4	2	168
30.	8	2	18	2	1	15
31.	140	43	511	102	24	383(2 hem.
32.	12	2	39	3	2	34
37.	10	2	62	5	1	56
39.	1	1	8	2	1	5
40.	19	6	66	10	6	50
42.	13	3	84	5	3	76
43.	34	10	263	40	18	205

M.D., I.D. or Spec. Ar.	Total No. of Premises	Total No. of Infected Premises	Total No. of Cattle	Positive	Suspicious	Negative
44	102	40	609	111	60	438
45	13	1	71	8	3	60
46	21	7	90	19	8	(1 hem. 61(brk.
47	72	5	287	9	8	270
48	80	18	532	34	18	480
49	80	32	544	152	38	354
50	1	1	12	6	1	5
52	56	12	262	30	13	219
53	91	22	571	73	24	474
54	102	32	332	54	17	261
55	61	15	328	26	20	282
56	3	2	24	3	-	21
57	12	1	48	1	-	(1 brk. 45(1 no serum
61	93	26	454	34	24	396
62	106	15	559	38	18	503
63	208	29	1,490	70	43	(2 brk 1,374(1 hem.
64	58	9	367	19	14	327(7 hem.
65	18	1	65	2	3	59 (1 no serum
66	61	7	391	17	10	362(2 brk.
68	1	-	1	-	-	1
71	100	24	540	56	35	447(2 hem.
72	5	1	68	9	4	55
73	70	10	504	21	12	(4 hem. 464(3 brk.
74	68	14	481	39	17	425
75	41	8	247	11	4	232
76	33	2	179	13	7	159
81	27	1	116	1	3	112
82	7	1	26	1	2	23
83	105	41	1,583	109	116	1,357(1 no serum

M.D., I.D. or Spec. Ar.	Total No. of Premises	Total No. of Infected Premises	Total No. of Cattle	Positive	Suspicious	Negative
84	6	2	33	3	3	27
86	10	1	32	1	-	31
87	3	-	9	-	-	9
89	30	4	143	6	2	134(1 brk.
90	10	1	48	2	2	44
91	29	6	217	10	15	192
92	81	2	378	12	4	362
93	36	5	187	6	6	(2 brk. 172(1 hem.
96	1	-	2	-	1	1
101	4	1	11	1	-	10
103	24	2	135	14	7	114
107	7	-	44	-	-	44
109	1	-	2	-	-	2
127	16	1	127	5	4	118
126	1	-	10	-	-	10
133	1	-	1	-	-	1
134	1	1	23	3	5	15
136	2	1	61	1	8	52
Spec. Ar. #2	47	17	333	101	15	216(1 brk.
Spec. Ar. #4	8	-	23	-	3	20
Spec. Ar. #3	32	6	344	28	12	303(1 brk.
B.C.	7	-	95	-	2	92(1 brk.
Que.	2	-	62	-	1	61
Sask.	13	3	45	4	6	35

POULTRY DISEASE SECTION

ADDENDA

NEWCASTLE DISEASE

Of eight Alberta cases of Newcastle disease from which the virus was recovered; five were handled through this laboratory. Notification of the other three cases was kindly supplied by the Dominion Health of Animals Division. The five positive from this Laboratory were out of seventy-four specimens submitted to Hull for Newcastle examination. The flock infections this year appeared to be quite mild and often complicated by other conditions e.g. coccidiosis, pullorum, omphalitis, etc. Chicks, poults and young pheasants were affected.

In a blood survey this year for Newcastle disease; 43 positives were found out of 769 blood samples submitted to the A.D.R.I. for HI testing. These represented 22 premises on which Newcastle disease had been present but was previously undiagnosed.

INFECTIOUS BRONCHITIS

The incidence of this condition in broiler chicks has prompted the recommendation of immunization for flocks supplying hatching eggs to a continuous broiler trade. This immunization could be confined with Newcastle vaccination. The objective was to provide baby chicks with a parental immunity to :

1. Protect them while at the hatchery and in transit.
2. Enable early Infectious Bronchitis vaccination if necessary.

CHRONIC RESPIRATORY DISEASE

The damaging effect of this disease was noted in baby chicks from two establishments. Losses of 10 - 20% were recorded till seven days of age. Post-mortem examination revealed froth in the airsacs, mucous in the trachea and in some pneumonia. The disease was also strongly suspected in three adult flocks. Findings of tracheitis with thick mucous; thickening of the airsacs with froth and pus flakes in these organs and laryngeal and tracheal plugs were discovered on post-mortem. Very slight reduction in egg production and few deaths were noted. Examination for other conditions was negative but transmission into turkeys was accomplished as manifest by sinusitis.

AVIAN TUBERCULOSIS

A slight reduction of cases was noted compared to 1951. Last year 5.5% of the specimens examined were diagnosed as Avian tuberculosis whereas for 1952, the percentage is only 4.2%. It is hoped that the Tuberculosis educational campaign may have been partly responsible for this decrease.

The fact that tuberculosis was found in free-flying birds (pheasants, pigeons and grouse) could incriminate them as carriers; it is possible, however that their infection was due to co-habitation with infected domestic poultry.

PARATYPHOID

The increase in *Salmonella* isolations (from 48 in 1951 to 131 in 1952) was somewhat alarming and appears to indicate a need for investigational work on control measures.

For the first time since routine *Salmonella* typing was undertaken, *S. typhimurium* has headed the list of isolates e.g. 35.4% in 1951 compared to 54.9% for 1952.

S. heidelberg is a new isolation to Alberta. It was found in four scattered groups of chicks and poults but in checking back all of these originated at the same hatchery. This organism was also isolated from four humans, the first human isolations of this type in Alberta. The possibility of the humans becoming infected from poultry flocks should not be overlooked.

PULLORUM

A great increase in the number of *S. pillorum* isolations was noted this year -- 120 farms found infected for 1952 compared to 48 for 1951. The reason for such increase is not known at present.

The percentage of variant isolations over total Pullorum isolations rose markedly in 1952 to 32.5% compared with 10.8% for 1951.

The following table gives the pullorum typing for four years.

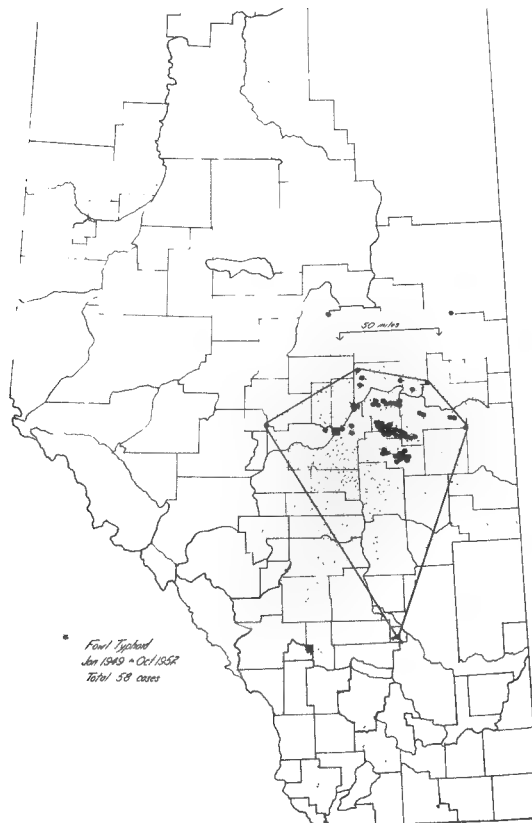
PULLORUM TYPING				
	1949	1950	1951	1952
STANDARD	33	22	34	68
VARIANT		2	5	39
INTERMEDIATE	7	9	7	11
NOT TYPED				2
TOTALS	40	33	46	120

FOWL TYPHOID

The number of premises from which *S. gallinarum* was isolated also rose in 1952 -- to 34 infected farms compared to 13 for 1951.

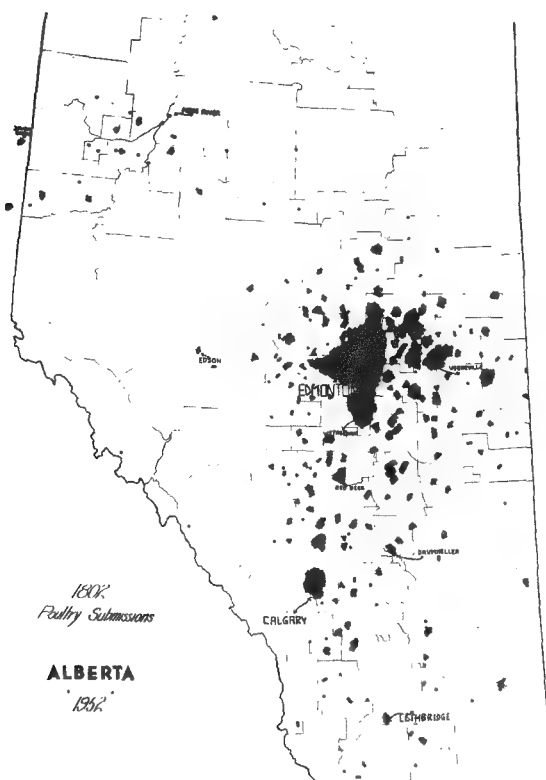
A map has been prepared over the past four years of all *S. gallinarum* isolations. This revealed that most of the Fowl typhoid appears to concentrate in an area approximately 50 miles square. A trip into this area revealed that poor, insanitary poultry management is generally the accepted way of raising poultry. A campaign aimed at raising the standard of poultry management and sanitation is now being prepared.

The following map shows the distribution of infected premises over the past four years up to October 1952. Since that time seven more infected premises have been found -- all within the same area. This brings the total cases for the four years to 65.



In an effort to find how well the province is being serviced by this laboratory; a map was prepared showing each farm from which specimens were received in 1952. This shows that the majority of the 1802 submissions were from 100 miles of Edmonton.

The following map illustrates the area serviced.



This condition appears to be increasing, judging by the number of cases diagnosed here. It would appear that Alberta farms are rapidly being seeded down with *Histomonas meleagridis* organisms. This together with the fact that on the majority of farms, chickens and turkeys are raised together under conditions that are far from ideal, indicates that Enterohepatitis will become of increasing importance unless general poultry management improves.

These two conditions were diagnosed in flocks of Alberta turkeys this year. In investigation of one farm on which Hexametiasis was present, the infection appeared to be fostered by poor feeding and insanitary turkey management.

Appreciation of the services rendered from this laboratory was expressed in many letters of thanks. For 1952, 48 of these letters were received.

DISEASES IN TURKEYS

<u>DISEASE</u>		<u>NUMBER</u>
Abscess		2
Aspergillosis		20
Ascites & Oedema		100
Ascites & oedema, pullorum	12	
Ascites & oedema	<u>88</u>	
	100	
Allergy		1
Biotin &/ or Pathothenic Acid Deficiency		10
Bruising of Leg Muscles		1
Brain Damage		1
Chronic Enteritis		1
Cardiac Weakness		3
Coccidiosis		131
Coccidiosis, vitamin A def.	32	
Coccidiosis, improper feeding	12	
Coccidiosis	77	
Coccidiosis, enteritis	<u>10</u>	
	131	
Chilling or Overheating		24
Cholera Fowl		21
Cecal Plug		1
Congenital Abnormalities		2
Chronic Respiratory Disease		2
Debility, Lice, Cecal Worms		1
Degeneration of Liver		1
Digestive derangement		1
Enteritis		134
Enteritis	108	
Enteritis, fiber	20	
Enteritis, gizzard impaction	<u>6</u>	
	134	
Erosion		17
Excess Sodium in Water		1
Erysipelas		4
Enterohepatitis		72
Gizzard Damage		5
Hepatitis		1
Hull - Virus Examination		3
Hemorrhage From Ovary		2
Hexametiasis		11
Injury		5
Impaction Gizzard		75
Impaction, gizzard, vitamin A def.	20	
Impaction gizzard, coccidiosis	25	
Impaction gizzard	<u>30</u>	
	75	
Improper Feeding		2
Intestinal Impaction		2
Infectious Sinusitis		21
Internally Laid Egg		1
Leukosis		10

<u>DISEASE</u>		<u>NUMBER</u>
Lysine Deficiency		1
Leukemia		1
Mineral Imbalance		1
Necrosis of Mucous Membrane		3
Nutritional Imbalance		4
No Definite Flock Diagnosis		12
N.V.L.		5
Newcastle Disease		1
Nervous Derangement		2
Neck Broken, Enteritis		2
Necrotic Enteritis		1
Omphalitis		184
Oesophageal Impaction		1
Pullorum		32
Poisoning		11
Poisoning, arsenic	3	
Poisoning, lead	2	
Poisoning, carbon monoxide	4	
Poisoning, kerosene	2	
	<u>11</u>	
Putrid		7
Perforation of Gizzard		5
Peritonitis		1
Paratyphoid		277
Paratyphoid,	202	
Paratyphoid, gizzard impaction	22	
Paratyphoid, intestinal coccidiosis	20	
Paratyphoid, ascites & oedema	18	
Paratyphoid, vitamin A deficiency	15	
	<u>277</u>	
Perosis		10
Protozoan Infection		1
Pneumonia		13
Pericarditis		3
Pseudomonas Infection		1
Puncture of Gizzard		1
Parapneumonia		1
Rickets		36
Rupture of Airsac		3
Staphylococcal Arthritis		3
Salmonella		2
Avian Tuberculosis		6
Tumors		1
To Toronto - Virus Laboratory		2
Traumatic Ventriculitis		4
Fowl Typhoid		40
Fowl Typhoid,	32	
Fowl Typhoid, enterohepatitis	8	
	<u>40</u>	
Trichomoniasis		2
Typhilitis		1
Tapeworms		1

<u>DISEASE</u>		<u>NUMBER</u>
Vitamin A Deficiency		38
Vitamin A deficiency	23	
Vitamin A deficiency, enteritis	8	
Vitamin A deficiency, excess fiber	<u>7</u>	
	38	

DISEASES IN CHICKENS

<u>DISEASE</u>		<u>NUMBER</u>
Abscesses		6
Abscess of lungs	4	
Abscess of breast	1	
Abscess in sinus	<u>1</u>	
	<u>6</u>	
Asphyxiation		1
Aspergillosis		6
Aspergillosis	3	
Aspergillosis, arthritis	<u>3</u>	
	6	
Ascites & Oedema		33
Ascites & oedema	24	
Ascites & oedema, paratyphoid	7	
Ascites & oedema, pulorum	<u>2</u>	
	33	
Abdominal Hernia		1
Arthritis, Granuloma		1
Breast Blister		2
Biotin &/ or Pathogenic Deficiency		1
Bumble Foot		2
Botulism		2
Concretion of Oviduct		5
Corneal Ulcers		1
Crushed		1
Cannibalism		2
Chilling or Overheating		55
Chilling or overheating	52	
Chilling or overheating, omphalitis	<u>3</u>	
	55	
Cholera, Fowl		30
Cholera, Fowl acute	18	
Cholera Fowl, chronic	1	
Cholera Fowl, lice	4	
Cholera fowl, infectious coryza	2	
Cholera Fowl, Vitamin A deficiency	3	
Cholera Fowl, neurolymphomatosis	<u>2</u>	
	30	
Coryza		1
Congenital Abnormalities		7
Cardiac Hypertrophy		1
Cecal Plug		2

<u>DISEASE</u>		<u>NUMBER</u>
Cecal Coccidiosis		128
Cecal coccidiosis	121	
Cecal coccidiosis, Vitamin A def.	4	
Cecal coccidiosis, impaction	<u>3</u>	
	128	
Cecal Worm Infestation		1
Chronic Respiratory Disease		6
Debility, Lice, Cecal Worms		1
Degeneration of Liver		1
Decomposed		3
Distention of Eye Balls		1
Duodenal Necrosis		1
Digestive Derangement		12
Egg Bound		3
Enteritis		108
Enteritis	57	
Enteritis, fiber	14	
Enteritis sawdust	4	
Enteritis, ashes	9	
Enteritis, gizzard erosion	4	
Enteritis, oat hulls	12	
Enteritis, necrotic	<u>8</u>	
	108	
Erosion Gizzard		5
Fibrosis of Liver		1
Fractured Femur		2
Favus Scalv Leg Condition		1
Gout, Visceral		3
Gizzard Damage		42
Gizzard damage	37	
Gizzard damage, nail	3	
Gizzard damage, mite infestation	<u>2</u>	
	42	
Gangrene of Leg Injury		1
Haematoma		1
Hepatitis		1
To Hull - Virus Examination		194
Hypertrophy of Right Oviduct		1
Hydro Pericardium		1
Infectious Bronchitis		66
Injury		4
Infectious Coryza		13
Infectious coryza	12	
Infectious coryza, cecal worms	<u>1</u>	
	13	
Impaction Gizzard		66
Impaction Gizzard	37	
Impaction gizzard, & crop	2	
Impaction gizzard, fiber	9	
Impaction gizzard, roup	4	
Impaction gizzard, vitamin A deficiency	7	
Impaction gizzard, enteritis	<u>7</u>	
	66	

<u>DISEASE</u>		<u>NUMBER</u>
Intestinal Coccidiosis		142
Intestinal coccidiosis	121	
Intestinal coccidiosis, fiber	4	
Intestinal coccidiosis, roup	20	
Intestinal coccidiosis, cecal cox.	7	
Intestinal coccidiosis, neurolymphomatosis	<u>10</u>	
	142	
Interna. Hemorrhage		7
Intussusception Intestine		1
Kidney Degeneration		8
Kidney degeneration	6	
Kidney degeneration, gizzard impaction	<u>2</u>	
	8	
Leukosis		151
Osteopetrotic Lymphomatosis	12	
Ocular Lymphomatosis	10	
Neurolymphomatosis	38	
Visceral Lymphomatosis	82	
Leukosis	<u>9</u>	
	151	
Laryngotracheitis		9
Leiomyoma		1
Listeriosis		1
Lysine Deficiency		1
Monocytosis, Avian		90
Monocytosis avian	72	
Monocytosis avian, lice	10	
Monocytosis avian, round worms	3	
Monocytosis avian, cecal worms	<u>15</u>	
	90	
Mainnutrition		3
Moulting, Infectious Coryza, Cecal Worms		3
Necrosis of Mucous Membrane		1
Nutritional Imbalance		10
Nutritional imbalance	8	
Nutritional imbalance, intest. cox.	<u>2</u>	
	10	
No Definite Flock Diagnosis		1
N. V. L.		47
N. V. L.	45	
N. V. L., cecal worms	<u>2</u>	
	47	
Nephritis		1
Newcastle Disease		8
Nervous Derangement		1
Omphalitis		70
Omphalitis	65	
Omphalitis, N. V. L.	<u>5</u>	
	70	

<u>DISEASE</u>		<u>NUMBER</u>
Ovarian Derangement		1
On Test		30
Pullorum		365
Pullorum	266	
Pullorum, gizzard impaction	2	
Pullorum, paratyphoid	97	
	<u>365</u>	
Poisoning		47
Poisoning, arsenic	20	
Poisoning, lead	4	
Poisoning, avian monocytosis, lead	2	
Poisoning, carbon monoxide	16	
Poisoning, Ergot, avian T.B.	1	
Poisoning, Kerosene	3	
Poisoning, mercury	1	
	<u>47</u>	
Putrid		12
Perforation		4
Perforation of gizzard	2	
Perforation of ceca	2	
	<u>4</u>	
Pendulous Crop		1
Prolapse		4
Prolapse of abdominal cavity	2	
Prolapse of oviduct	2	
	<u>4</u>	
Peritonitis		21
Peritonitis	10	
Peritonitis, necrosis	1	
Peritonitis, egg bound	3	
Peritonitis, enteritis	4	
Peritonitis, ocular lymphomatosis	3	
	<u>21</u>	
Paratyphoid		67
Perosis		6
Perosis	4	
Perosis, arthritis	2	
	<u>6</u>	
Protozoan Infection		2
Proventriculitis		3
Rickets		54
Rickets, vitamin D Deficiency	35	
Rickets, avian monocytosis	11	
Rickets, gizzard impaction	8	
	<u>54</u>	
Riboflavin Deficiency		2
Rupture of Airsac, N.V.L.		2
Respiratory Condition		1
Salpingitis		2

<u>DISEASE</u>		<u>NUMBER</u>
Starvation		9
Starvation	3	
Semi-starvation	3	
Starvation, cecal worms	<u>3</u>	
	9	
Stricture of Intestine		1
Stunted		1
Shock		1
Shot		2
Tracheitis, Round Worms		3
Avian Tuberculosis		145
Avian tuberculosis	120	
Avian tuberculosis, lice	1 1	
Avian tuberculosis, infectious coryza	2	
Avian tuberculosis, Vitamin A deficiency	5	
Avian tuberculosis, gizzard damage	4	
Avian tuberculosis, visceral lymph.	<u>3</u>	
	145	
Tumors		6
Tumors, Fibroma	1	
Tumors, of lung	1	
Tumors, of brain	1	
Tumors, fibro sarcome	1	
Tumors, of liver	<u>2</u>	
	6	
To Toronto - Virus Laboratory		25
Traumatic Ventriculitis		3
Trauma of Head		1
Typhoid, Fowl		28
Vitamin A Deficiency		106
Vitamin A deficiency	2 8	
Vitamin A deficiency, bed mites	2	
Vitamin A deficiency, lice	1 2	
Vitamin A deficiency, leukosis	9	
Vitamin A deficiency, visceral lymph.	12	
Vitamin A deficiency, gizzard impaction	15	
Vitamin A deficiency, lead poisoning	4	
Vitamin A deficiency, enteritis	1 5	
Vitamin A deficiency, pullorum	<u>9</u>	
	106	
Vent Gleet		4
Vent gleet, cecal worms	1	
Vent gleet, round worms, lice	<u>3</u>	
	4	
Unabsorbed Yolk Sac		1 0

MISCELLANEOUS DISEASES

<u>DISEASE</u>	<u>NUMBER</u>
Abscess	4
Asphixiation	1
Arthritis	2
Amputation	1
Bumble Foot	2

<u>DISEASE</u>		<u>NUMBER</u>
Botulism		1
Bruising of Leg Muscles		1
Brain Damage		1
Crushed		3
Coccidiosis		2
Chilling or Overheating		6
Capillary Rupture		5
Concussion		1
Constipation		1
Enteritis		6
Fractured Skull		1
Fatty Infiltration of Liver		1
Gout Visceral		1
Hepatitis		1
Hull - Virus Examination		59
Hemorrhage from Ovary		1
Hyperkeratosis		4
Impaction of Gizzard		1
Leucocytozoons, N.V.L.		17
Nutritional Imbalance		1
N.V.L.		54
Negative		1
Normal Gizzard		1
Pullorum		26
Poisoning		13
Poisoning, lead	7	
Poisoning, arsenic	3	
Poisoning, ergot	<u>3</u>	
	13	
Putrid		8
Peritonitis		2
Paratyphoid		17
Perosis		1
Protozoan Infection		1
Pneumonia		3
Rickets		3
Shot		27
Shot,	8	
Shot, N.V.P.L.	11	
Shot, Avian tuberculosis	<u>8</u>	
	27	
Subcutaneous Worms		2
Sarcosporidiosis		1
Avian Tuberculosis		27
Tumors		2
Typhoid Fowl		3
Tapeworms		4
Toxic		1
Toxaemia		2
Vitamin A Deficiency		6
Worms		1

DEPARTMENT OF AGRICULTURE

POULTRY SPECIMENS

MONTH	CHICKEN			TURKEY			MISCELLANEOUS			MISC. SAMPLES	FEED SAMPLES	TOTALS	BLOOD SPECIMENS	GRAND TOTALS
	Live	Dead	Portion	Live	Dead	Portion	Live	Dead	Portion					
January	28	47	1	3	6	1	0	9	1	0	4	100	0	100
February	113	109	2	5	22	0	0	18	0	44	9	322	64	386
March	77	142	5	16	162	1	0	22	1	5	10	441	390	831
April	107	365	4	25	222	1	1	15	0	8	19	767	38	805
May	174	254	2	40	344	0	1	11	1	9	17	853	75	928
June	94	157	7	54	159	3	1	39	0	2	7	523	0	523
July	69	63	7	37	117	1	2	8	0	3	1	308	0	308
August	76	52	8	28	49	1	6	4	1	8	1	234	0	234
September	110	45	6	15	29	2	2	13	0	1	5	227	51	278
October	63	64	6	11	19	0	1	15	0	20	1	200	0	200
November	33	23	16	8	8	0	0	5	1	2	3	99	3	102
December	18	31	6	9	6	10	0	30	3	18	0	131	0	131
TOTALS	962	1352	70	251	1143	20	14	189	8	120	77	4204	621	4825

POULTRY DISEASES

DISEASE	CHICKENS	TURKEYS	MISCELLANEOUS	TOTAL
Abscess	6	2	4	12
Abdominal Hernia	1			1
Asphixiation	1		1	2
Aspergillosis	6	20		26
Ascites & Oedema	33	100		133
Arthritis	1		2	3
Allergy		1		1
Amputation			1	1
Breast Blister	1			1
Biotin, Pantho- thenic Def.	1	10		11
Bumble Foot	2		2	4
Botulism	2		1	3
Bruising of leg Muscles		1	1	2
Biotin Deficiency		1		1
Brain Damage		1	1	2
Concretion of Oviduct	5			5
Corneal Ulcers	1			1
Crushed	2		3	5
Cannibalism	2			2
Chronic Enteritis		1		1
Cardiac Weakness		3		3
Coccidiosis	270	131	2	403
Chilling or Overheating	55	24	6	85
Cholera Fowl	30	21		51
Coryza	1			1
Cecal Plug	2	1		3
Cardiac Hypertrophy	1			1
Congenital Abnormalities	7	2		9
Chronic res- piratory Disease	6	2		8
Cecal Worm Infestation	1			1
Capillary Rupture			5	5
Concussion			1	1
Debility, Lice, Cecal Worms		1		1
Degeneration of Liver	1	1		2
Decomposed	3			3
Distention of Eye Balls	1			1
Duodenal Necrosis	1			1
Digestive Derangement	12	1		13
Egg Bound	3			3
Enteritis	108	134	6	248
Erosion	5	17		22
Excess Sodium in Water		1		1
Erysipelas		4		4

DISEASE	CHICKENS	TURKEYS	MISCELLANEOUS	TOTAL
Enterohepatitis		72		72
Fibrosis of Liver	1			1
Fractured Femur	2			2
Fractured Skull			1	1
Favus Scaley				
Leg Condition	1			1
Fatty Infiltration of Liver			1	1
Gout Visceral	3		1	4
Gizzard Damage	42	5		47
Gangrene of Leg				
Injury	1			1
Haematoma	1			1
Hepatitis	1	1	1	3
Hull - Virus Examination	194	3	59	256
Hemorrhage from Ovary		2	1	3
Hemorrhage	7			7
Hypertrophy of Right Oviduct	1			1
Hydro Pericardium	1			1
Hexamitiasis		11		11
Hyperkeratosis			4	4
Infectious Bronchitis	66			66
Injury	4	5		9
Infectious Coryza	13			13
Impaction, Gizzard	66	75	1	142
Immaturity	2			2
Intussuception Intestine	1			1
Improper Feeding		2		2
Intestinal Impaction		2		2
Infectious Sinusitis		21		21
Internally Laid Egg		1		1
Kidney Degeneration	8			8
Leukosis	153	10		163
Lysine Deficiency	1	1		2
Leukemia		1		1
Leucocytozoons, N. V. L.			17	17
Monocytosis, Avian	90			90
Malnutrition	3			3
Moulting	3			3
Mineral Imbalance		1		1
Necrosis of Mucus Membrane	1	3		4
Nutritional Imbalance	10	4	1	15
No Definite Flock Diagnosis	1	12		13
N. V. L.	47	5	54	106
Nephritis	1			1
Newcastle Disease	8	1		9
Nervous Derangement	1	2		3
Neck Broken, Enteritis		2		2
Necrotic Enteritis		1		1
Negative			1	1
Normal Gizzard			1	1
Omphalitis	70	184		254

DISEASE	CHICKENS	TURKEYS	MISCELLANEOUS	TOTAL
Ovarian Derangement	1			1
On Test	30			30
Oesophageal Impaction		1		1
Pullorum	365	32	26	423
Poisoning	47	11	13	71
Putrid	12	7	8	27
Perforation	4	5		9
Pendulous Crop	1			1
Prolapse	21			21
Peritonitis	21	1	2	24
Paratyphoid	67	277	17	361
Perosis	6	10	1	17
Protozoan Infection	2	1	1	4
Proventriculitis	3			3
Pneumonia		13	3	16
Pericarditis		3		3
Pseudomonas Infection		1		1
Puncture of Gizzard		1		1
Paraplegia		1		1
Rickets	54	36	3	93
Riboflavin Deficiency	2			2
Rupture of Airsac	2	3		5
Respiratory Condition	2			2
Salpingitis	2			2
Starvation	9			9
Stricture of Intestine	1			1
Stunted	1			1
Shock	2			2
Shot	3		27	30
Staphylococcal Arthritis		3		3
Salmonella		2		2
Subcutaneous Worms			2	2
Sarcosporidiosis			1	1
Tracheitis	1			1
Avian Tuberculosis	145	6	27	178
Tumors	6	1	2	9
To Toronto-Virus Laboratory	25	2		27
Traumatic Ventriculitis	3	4		7
Trauma of Head	1			1
Typhoid Fowl	28	40	3	71
Trichomoniasis		2		2
Typhinitis		1		1
Tapeworms		1	4	5
Toxemia			2	2
Toxic			1	1
Vitamin A Deficiency	106	38	6	150
Vent Gleet	4			4
Unabsorbed Yolk Sac	10			10
Worms			1	1
Addenda				
Feed			77	77
Water			17	17
Miscellaneous, Medicine, Litter, Grit, Etc.			9	9

REPORT OF FUR FARMS BRANCH

J. Kokotsky - - - Fur Farm Supervisor

GENERAL:

The Alberta fur farming outlook in 1952 experienced a slight decrease in actual number of licensed fur farmers although the total number of breeding stock carried over showed an increase. Fur farmers with less than fifty mink breeders, and those who raised mink as a sideline, found it difficult to continue operations due to increased cost of production. Full time operators ranching on a larger scale were able to keep up with the times with additions of the latest and more expensive mutations, the sale of which helped in some way at least to compensate for higher cost of production.

It is fortunate for the industry that the men engaged in fur farming have the perseverance, courage and optimism to continue in spite of market fluctuations and adverse conditions from time to time.

STOCK

Short haired furs continue to lead the way in fur fashions. Ranch mink, due to scientific breeding principles, have been developed in various color phases which can be readily adapted to meet any fashion requirement. Besides its excellent wearing qualities and luxurious look, the wide variety of natural colors make it possible to manufacture these furs without the use of artificial dyes. The color is stable and is not conducive to fading.

Because of this versatility and popularity, mink now consists approximately about 75% of all fur-bearers raised in captivity. The balance is made up of fox, marten and chinchilla.

Fox has not been able to regain the popularity once held and is gradually on the decline. Only very few breeders maintain a skeleton herd - hoping that someday there will be a revival of interest.

Chinchilla have been on the increase in the past few years. Any activity in this rodent fur-bearer has been confined to breeding stock promotion only.

Marten have been raised successfully, but the low average production has somewhat curtailed interest in this fur from a ranching point of view.

THE FUR MARKET

The mink pelt market opened up very favorably in December 1951. This increase was caused by a retarded pelting season in the United States as well as a very low carry over from the previous year. Ranchers who were fortunate in placing their pelt crop on the early sales received the highest prices of the season. Subsequent sales during the months of January to July showed a gradual decline and the market took on a very gloomy appearance. A 10% improvement was noted during midsummer and early Fall.

The 1952 crop of pelts has now entered the market at steady prices. Fine quality standard mink pelts as well as good quality mutations are selling at satisfactory prices.

Fur farmers must realize here that many of them have diverted their ranches to production of finer mutations. This change resulted in an increased production of hybrid dark mink for which there is very little demand. Once these are gradually eliminated the ranch pelt average can be improved considerably.

Pelt prices are based on the law of supply and demand as well as clearness of color, size, quality, texture, density and color blend.

The following is an analysis of top and average prices received on some of the more popular types of mink pelts sold during the year.

Type	Top Price	Average Price
Sapphire	\$135.00	\$52.00
Snowwhite	90.00	28.00
Pastel	56.00	21.00
Silverblu	35.00	16.00
Standard	35.00	14.00
Hybrid	18.00	12.00

During the past year size of pelts played a major part in determining pelt prices. Female pelts due to their smaller size were discounted approximately 50% in relation to male pelt prices. This accounts for lower average price which is based on both male and female pelts.

BREEDING STOCK

Continued improvement of breeding stock through various services offered by the Fur Farms Branch of the Department of Agriculture has resulted in an increased demand for Alberta Ranch Mink for herd improvement in other parts of Canada as well as the United States and abroad.

During the past year shipments of Alberta ranch raised mink were made to the following countries, Denmark, Sweden, England, United States, as well as all the Provinces in Canada and the North West Territories.

A total of 940 mink were exported out of the Province.

FEED SUPPLY

The feed supply in Alberta is becoming an ever increasing problem. The price of horsemeat has increased to 8¢ per lb., thus raising the cost of production. This has been a major factor in gradual decline in number of active fur farmers.

Some experiments are underway to determine whether mink can be raised on lower animal protein diets and meat substitutes. Satisfactory data in this direction may in part at least solve some of the existing pelt problems.

Any further increase in horsemeat will definitely decrease the margin of profit to a very dangerous point and undoubtedly will be directly responsible for a further decline in number of fur farms.

During the past year two prominent fur ranchers moved to the Pacific Coast where available supplies of ocean fish at reasonable prices may be obtained. There is an indication that several others are contemplating similar moves.

EXTENSION WORK

Inspections were carried out on numerous ranches throughout the Province. Through personal contact or correspondence practical suggestions and advice is passed on to ranchers in problems pertaining to the fur ranch industry.

Field Days and Field Day Meetings were held at the following points during October and November.

Medicine Hat	Joussard
Lethbridge	Faust
Calgary	Widewater
Stettler	Seba Beach
Lacombe	Wetaskiwin
Edmonton	

Fur farmers have realized the significance of these field days in their line of business. This together with very favorable weather conditions resulted in a definite increase in attendance.

The annual Live Mink Field Days were in reality Live Mink Shows on a small scale. Educational lectures and practical demonstrations of grading and judging of mink stock improvement were carried out.

The Field Day party consisted of Mr. Norman L. Boyd of Vancouver, who acted in the capacity of mink judge and lectured on fur quality and market trends.

Dr. E.E. Balantyne, Director of Veterinary Services, and Dr. J. O'Donoghue, Extension Veterinarian, alternately in different sections, led discussions on disease control, sanitation and other problems pertaining to health.

Messrs. D. R. Fraser, J. N. Cawsey, H. J. Montgomery, F. Zenko and R. Quail represented the Alberta Fur Breeders' Association and its importance to the industry.

J. Kokolsky, Fur Farm Supervisor, was in charge of the Field Day Schedule and arrangements. Topics relating to various phases of fur farming were thoroughly discussed in open forums.

FUR FARMING SHORT COURSE

A series of lectures on elementary principles of Fur Farming were given to Second Year and Two-in-One classes at the Vermilion and Olds Schools of Agriculture in January and February. This service met with the approval of the students and it is possible that it will be extended to include the Fairview School of Agriculture this coming year.

FUR BREEDERS' ORGANIZATION

The Alberta Fur Breeders' Association continues to function in a very satisfactory manner. Its executive works in close harmony with the newly formed Canadian Mink Breeders' Association, a national body organized primarily to promote and look after the interests of fur breeders on a national basis.

The Alberta Fur Breeders' Association likewise co-operates and works closely with the Fur Farms Branch of the Department of Agriculture.

LIVE ANIMAL SHOW

This event took place in Calgary on November 17, 18 and 19, 1952. From an organizing point of view and the number of entries received, it was without a doubt one of the finest and largest shows of this nature ever held in Canada.

For the first time in the history of Live Mink Shows in Canada, all judging was done in a heated building under a special lighting system.

Alberta Shows have always been popular with exhibitors from other Provinces. This year apart from local exhibitors, entries were received from Saskatchewan, Manitoba and British Columbia. The quality of animals benched at the show was a tremendous improvement over past years. Equally important is the fact that these breeders have the enterprise and virility to move forward in the face of many discouraging conditions. Only by means of shows can improvement progress be measured.

HEALTH

There has been a sharp decline in number of distemper cases reported. Any that did appear were more or less isolated cases in remote areas. The Distemper Vaccine Assistance Plan in its third year of successful operation has been an attributing factor in making the fur farmer disease control conscious. More and more ranchers avail themselves of the diagnostic service offered by the Provincial Veterinary Laboratory, thereby checking any outbreaks of disease before it has a chance to gain foothold.

Much of this has been accomplished through the kind co-operation of the staff of the Provincial Veterinary Laboratory.

FUR FARM STATISTICS FOR YEAR ENDING AUGUST 31st, 1952

Number of Animals Declared on Fur Farms in Alberta 1951 - 1952

<u>Kind of Animal</u>	<u>Total No. of Animals</u>	<u>Av. Value Per Animal Sept. 1/51</u>	<u>Total Valuation</u>
Fox, Standard	6,396	\$ 12.00	\$ 76,752.00
Fox, Mutation	3	10.00	30.00
Fox, Blue and White	77	10.00	770.00
Mink, Standard	1 63,552	16.00	2,616,832.00
Mink, Mutation	58,091	25.00	1,452,275.00
Marten	141	30.00	4,230.00
Chinchilla	1,246	100.00	124,600.00
Nutria	11	5.00	55.00
Fisher	12	50.00	600.00
	<u>2 29,529</u>		<u>\$4,276,144.00</u>

Number of Animals Pelted on Fur Farms in Alberta 1951 - 1952

<u>Kind of Animal</u>	<u>Total No. of Animals</u>	<u>Av. Value Per Animal Fall 1951</u>	<u>Total Valuation</u>
Fox, Standard	4,846	\$12.00	\$ 58,152.00
Fox, Mutation	1	10.00	10.00
Fox, Blue and White	4	10.00	40.00
Mink, Standard	112,890	16.00	1,806,240.00
Mink, Mutation	34,438	25.00	860,950.00
Marten	25	30.00	750.00
Chinchilla	21	10.00	210.00
Nutria	Nil		
Fisher	7	25.00	175.00
	<u>152,232</u>		<u>\$2,726,527.00</u>

Number of Live Animals Exported from Alberta 1951 - 1952

<u>Kind of Animal</u>	<u>Total No. of Animals</u>	<u>Av. Value Per Animal</u>	<u>Total Valuation</u>
Fox, Standard	Nil	\$	\$
Fox, Mutation	Nil		
Fox, Blue and White	Nil		
Mink, Standard	339	50.00	16,950.00
Mink, Mutation	601	100.00	60,100.00
Marten	19	100.00	1,900.00
Chinchilla	153	200.00	30,600.00
Nutria	Nil		
Fisher	Nil		
	<u>1,112</u>		<u>\$ 109,550.00</u>

Number of Animals Retained for Breeding Stock in Alberta 1951 - 1952

<u>Kind of Animal</u>	<u>Total No. of Animals</u>	<u>Av. Value Per Animal Dec. 31/51</u>	<u>Total Valuation</u>
Fox, Standard	1,550	\$ 25.00	\$ 38,750.00
Fox, Mutation	2	20.00	40.00
Fox, Blue and White	73	15.00	1,095.00
Mink, Standard	50,323	20.00	1,006,460.00
Mink, Mutation	23,052	40.00	922,080.00
Marten	97	50.00	4,850.00
Chinchilla	1,072	100.00	107,200.00
Nutria	11	5.00	55.00
Fisher	<u>5</u>	<u>50.00</u>	<u>250.00</u>
	76,185		\$2,080,780.00

Fur Farm Licenses 1951-52 Season

Fox	43
Fox and Mink	31
Mink	806
Mink, Marten and Fox	1
Marten and Mink	5
Chinchilla	84
Nutria	2
Fisher and Mink	<u>1</u>
	973

REPORT OF THE APICULTURE BRANCH

1952

W. G. leMaistre, Provincial Apiarist
J. W. Edmunds, Supervisor, Apiary Inspection

The total honey crop of 4,900,000 pounds is 9% larger than the 1951 crop in spite of a 9% decline in the number of colonies operated. The average production per hive was 142 pounds, the largest per colony yield since 1938. The average per colony yield for the ten years 1943 - 1952 is 103 pounds.

The number of colonies operated continues to decline. There were 34,600 in 1952 and 38,100 in 1951. This decline is less than it has been during the past four years. There are fewer operators of small apiaries in relation to large apiaries. This trend toward specialization has been apparent for the last four years. In 1948 the average number of hives per beekeeper was 10, in 1952 this figure rose to 17. It is to be expected that this trend will continue. There was a decline of 5% in the number of beekeepers in this province. The overall decline in Canada was 16%.

Several enquiries have been received from seed growers seeking the co-operation of beekeepers for pollination of seed crops. Some beekeepers are able to provide this service for which they are being compensated by the seed grower. Some increase in this type of undertaking has taken place.

General:

Transportation of package bees for colonies in the spring was mainly by truck. Some revisions in the express zones reduced the railway express rates so that these charges are now more competitive.

The average cost, laid down in Alberta, of two pound packages of bees was approximately \$4.50 and \$5.50 for three pound packages.

Louis Regamey of North Edmonton was awarded four prizes for honey sent to the Royal Winter Fair in Toronto.

Season:

Early spring weather was warm and relatively free of frosts with no spells of bad weather. Thus bloom on early flowering plants was abundant and bee flight was practically uninterrupted. These conditions were ideal for colonies to build up their populations before the main honey flow.

Early summer rains produced abundant growth of clover. This was followed by sunshine and fair weather during July and August. While higher temperatures might have resulted in higher yields, on the whole abundant nectar was secreted. The fact that the average colony yield was 133 pounds is a fair indication of conditions. There were several reports of exceptionally high yields. Dry fall weather made it possible for the bees to ripen the honey thoroughly. The overall crop was very high quality.

Honey Grading:

Honey grading regulations became effective in June. These regulations are under the Livestock and Livestock Products Act, Chapter 88, R.S.A. 1942. The regulations require that all honey in the trade must be graded and marked by the packer. Where a beekeeper is in doubt concerning the proper grading of his honey he can send representative samples to this Branch. Determinations are made and the beekeeper informed. The samples submitted graded as follows:

No. 1	143
No. 2	18
No. 3	24
Below grade	<u>5</u>
	190

Inspection of honey in the trade is carried out by officers of the Dominion Department of Agriculture and members of the Apiculture Branch. 600 inspections with 14 violations of the regulations were recorded. Most of these violations (13) were on account of improper container marking.

Marketing:

There was a fair demand for honey in the fall, particularly in bulk containers. Honey packers were requesting more than previously and were competing to some extent, for supplies. An increase in the price of bulk was not reflected in the retail price of consumer packs on sale in Alberta.

The fact that most other provinces showed a decline in honey production might have indicated a fair rise in price. While this may be evident before the crop is consumed it has not been very evident this year. This fact indicates a lack of organization or an appreciation of marketing factors by the producers.

A continued decline in the number of hives operated suggests that the 1951 price was not attractive. An estimated increase of 9% in price of the 1952 crop plus a high yield has improved the beekeepers position. A somewhat more optimistic attitude amongst them is evident. There is a trend towards bulk shipments by beekeepers and away from retail selling by them.

Crop reports are prepared and published in co-operation with the federal Department of Agriculture every two weeks in the summer.

Extension:

Information on beekeeping is distributed through press notices, radio talks, bulletins, leaflets, correspondence, lectures, moving pictures and circulars. There were 19 lectures and field demonstrations. The fourteen men out on inspection are proving helpful in making improved beekeeping practices in general better understood. The bulletin "Beekeeping for Beginners in Alberta" was revised. Technical advice is supplied, not only to beekeepers, but bee supplies firms and honey packers.

Beekeepers Organizations:

The Provincial Apiarist relinquished his position as secretary of the Alberta Beekeepers Association. This organization, local associations and the Alberta Honey Producers Co-operative Ltd., are given assistance on technical matters.

Disease Control:

The percentage of diseased colonies showed a decrease of .6% from last year due mainly to two reasons: beekeepers are becoming more familiar with the symptoms of the disease and secondly, the wax melting unit supplied by the Department considerably reduces the loss caused by diseased equipment.

Fourteen inspectors were appointed under the Bee Diseases Act. Inspectors are located in the main honey producing areas with headquarters at:

Aetna	Westlock
Calgary	Gibbons
Red Deer	Athabasca
Edmonton	Falher
Sangudo	St. Lina

Mr. Rene Dubeau of St. Lina was newly appointed as inspector for the St. Paul district. Fourteen cases of disease were reported from that district.

	1951	1952
No. of colonies inspected	10,452	6,528
No. of Apiaries inspected	851	639
No. of diseased colonies	865	584
Diseased colonies (% of total)	2.3	1.7

In 1952 inspection services were given to 22% of the beekeepers, 18.8% of the total number of colonies were inspected. Large commercial beekeepers are left responsible for disease control since they have familiarized themselves with symptoms and control of disease.

A diagnostic service is maintained by this Branch for analysing samples of comb suspected of disease. Beekeepers may forward such samples and are informed of the results of the diagnosis and the treatment recommended in case of disease.

Samples of American Foulbrood diagnosed	46
Samples of European Foulbrood diagnosed	11
Samples containing no disease	56

The two wax melting units designed and supervised by this Branch for treating diseased equipment, salvaged \$7,418.00 worth of wax, 5,135 infected supers were sterilized. This service has been effective in reducing the amount of disease in the province.

A considerable amount of unused equipment which cannot be satisfactorily inspected has been sterilized by use of the wax melting machine. This disposes of a potential source of infection.

Beekeepers are required to register annually for permits to operate bee colonies, also for permits to sell or move equipment. Records of all apiary locations are kept by this Branch. 105 moving permits were issued; sixty-seven of these for seasonal moving only. Thirty-eight permits were issued for sale of used equipment.

Investigations'

Honey Straining:

One of the difficult problems in the production of number 1 grade honey is that of removing wax and other particles that are incident to extracting. Straining is difficult owing to the viscous nature of honey. It becomes a bottle neck in the extracting process.

An Alberta beekeeper, J. M. Marcy of Brooks, adapted a "Cuno" filter for trial as a honey filter. This Branch made observations, suggested changes and reported on its efficiency.

This filter is made up of a column of discs spaced .0025 inches apart. This column is revolved slowly or periodically past cleaners. This keeps the spaces cleared to permit the flow of honey. The column of discs is enclosed in a canister in which the foreign material removed by the cleaners accumulates. The canister was emptied for every 1,000 to 1,500 pounds of honey run.

The results suggest that this type of filter is suited to use in extracting plants. It does permit flat scales of wax and cocoons to pass through but these are readily stopped by a cloth strainer on the discharge pipe. That which passes through amounts to about a teaspoonful per 3,000 pounds.

The strainer operated most satisfactorily (1) in a horizontal position (2) at temperatures between 95 degrees and 105 degrees Fahr. (3) At pressures between 5 and 10 pounds per square inch maintained with a honey pump. (4) At a rate of flow between 300 and 400 pounds per hour.

Creamed Honey:

There is a consumer demand for "creamed" honey. There is neither a definition nor a standard method of producing it. Some tests were begun with the co-operation of F. W. Wood, Department of Dairying, University of Alberta, to determine whether the influence of temperatures was sufficiently significant to indicate a means of controlling consistency.



Cuno filter as adapted for use on honey

A honey of known density was liquified, seeded with 5% of seed and permitted to set for varying periods at 55 degrees Fahr. Samples were placed at 5 degrees Fahr. for varying periods. Consistometer readings were recorded. The samples are now in storage at 70 degrees Fahr. for six months. They will be rechecked for consistometer readings and separation or break-down.

Honey Production Tests:

Test No. 1

Package bees are normally established in hives from the middle of April to the middle of May. A two-pound package contains from 8,000 to 10,000 bees and a good producing colony requires at least 50,000 bees. It was thought that under Alberta conditions the majority of packages are being brought in too late in the season to build up sufficiently for maximum honey production.

Tests were conducted in 1952 to obtain data on honey production of packages brought in on different dates. Test yards were set up in the Sangudo district. Arrangements were made with a local beekeeper to supply and manage the colonies under supervision of this Branch. The yards were chosen approximately ten miles apart to give a difference in floral sources of nectar and soil conditions. In each of the two yards twenty packages were installed on the 5th of April and twenty packages on the 26th of April. Colonies were operated under standard commercial management. In September the bees were killed and honey crop removed. The honey from each group was weighed and each group treated as one unit.

Results

Yard	Bees Installed April 5.		Bees Installed April 26.	
	Production in pounds			
	Total	Av. per Col.	Total	Av. per Col.
A	6,350	317.5	4,600	230
B	4,315	215.7	3,264	163.2
Total (on 40 Colonies)	10,665	266.6	7,864	196.6

In yard A early colonies produced 87.5 pounds per colony more than the later ones. In yard B the early colonies produced 52.5 pounds per colony more.

Remarks:

It should be recorded that the season (1952) was very favourable both as to spring weather for building up colonies and for a main honey flow in the locality where these tests were made. It would seem that in 1952 an increased yield of over 35.2% could be harvested from packages installed in hives during the first few days of April compared to those installed three weeks later. It would be worthwhile accumulating further data concerning installation dates for package bees in Alberta.

Test No. 2

Enquiries have been received regarding the merit of the two queen system of management of colonies. Tests were carried out in order to obtain information on the adaptability of this system in Alberta.

Six colonies were installed at this Branch's apiary at Oliver on April 15th, 1952. Two of these were established from two-pound packages, two using three-pound packages and two using a two queen system. In September the bees were killed and the honey weighed from each colony as it was extracted.

Results:

	Total Production	Av. Production per colony
Two pound package	215	125
Three pound package	432	216
2 queen colony	518	259

Results on a Cost and Profit Basis:

	Cost of Package	Value of Honey produced	Gross Profit per colony
Two pound package	\$5.00	\$12.50	\$7.50
Three pound package	6.00	21.60	15.60
Two queen colony	8.20	25.90	17.70

Comments:

Owing to a failing queen the two-pound packages were somewhat below normal, however the two queen colonies were far more populous than other colonies. It is thought the two queen system merits testing by commercial operators.

ALFALFA POLLINATION TRIALS:

The effect of honey bees as pollinators of alfalfa in Alberta has not been known. There is ample evidence that elsewhere honey bees, under proper conditions, greatly increase seed setting through cross pollination of this crop.

Tests with honey bees on alfalfa were undertaken in conjunction with the Plant Science division of the University of Alberta. Two fields three miles apart in the Cherrill district were used. Fifty-eight colonies of honey bees were placed at one end of one field on July 21st, when the field was thirty per cent in bloom. Data regarding wild bee and honey bee activity was obtained.

The field on which the hives were placed had a mean seed yield of 60.2 pounds per acre. On the control field the yield was 38.0 pounds per acre. There was a significantly higher seed yield up to 300 yards from the hives - 113 pounds per acre. This difference in seed yield in the two fields was not occasioned by the presence of wild bees since the control field had a much greater wild bee population than the bee field.

NUMBER OF BEES PER ACRE JULY 8 TO AUG. 9

	Honey Bees		Leaf Cutter	Bumble
	Before bees moved to field	After bees moved to field		
Bee Field	94	400	7	2
Control field	3	23	15	56

While a much greater effect might have been expected from the large honey bee population contiguous to the bee field it is evident that some effect was obtained. It was observed that the honey bees were, in large measure, flying to the east from their hives, whereas the alfalfa field in question lay immediately in front of them to the west.

It should be recorded that seed yields of alfalfa in general in this district were small; climatic conditions were considered unfavourable at the time of bloom.

In view of the positive though limited effect of the honey bees in this test it would seem desirable to continue investigations on these lines.

Statistics:

	1951	1952	% Change
Honey Production '000 lbs.	4,500	4,900	9
Average Net price per lb.	11¢	12¢	+ 9
Value '000 dollars	495	588	+ 9
Beeswax, Value '000 dollars	29	30	+ 3.4
Number of beekeepers	* 2,120	2,010	-5
Number of hives	38,100	34,600	-9
Number hives per beekeeper	** 18	17.2	
Average production per hive	118	142	+ 25

* Corrected from 2,720 1951 Report
** Corrected from 14 1951 Report

REPORT OF SCHOOLS OF AGRICULTURE BRANCH

R. M. Putnam, Superintendent, Schools of Agriculture
 J. E. Birdsall, Principal, Olds School of Agriculture
 N. N. Bentley, Principal, Vermilion School of Agriculture
 J. E. Hawker, Principal, Fairview School of Agriculture

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General

The three Schools of Agriculture and Home Economics at Olds, Vermilion and Fairview enjoyed another successful year in 1952. One hundred fifty-seven diplomas were presented at graduation exercises in April. There were no graduates at Fairview, as the first year courses only were offered during 1951-52.

	Olds	Vermilion
Diplomas in Agriculture	61	57
Diplomas in Home Economics	<u>20</u>	<u>19</u>
	81	76

A major change in staff occurred on June 1st, when Mr. J. E. Birdsall was appointed as Principal of the Olds School of Agriculture to succeed Mr. C. E. Yauch, who was obliged to relinquish his duties as Principal for reasons of health. Mr. Yauch transferred to the Extension Branch of the Department at Lethbridge. Mr. Birdsall was formerly the Supervisor of Crop Improvement with the Field Crops Branch and a former graduate of O. S. A.

In addition to the change of a Principal, there were an unusually large number of changes in staff, as well. A total of fourteen new instructors were hired during the year to replace twelve who resigned or were transferred and to provide two additional teachers at Fairview. The retention of experienced staff is a factor of some importance in the efficiency of the schools and although some changes are bound to occur, too large a number is not desirable.

A special arrangement was made at the School of Agriculture at Vermilion in 1952 whereby certain facilities of the school were leased to the Vermilion School Division from September 1st to October 18th and from April 1st to June 30th, 1953, for the purpose of offering a shop course and a course in home economics to the junior high school students. The services of two instructors to teach these courses were provided by the Department of Agriculture.

A conference of the staffs of the three schools was held at Fairview on October 5th and 6th. Matters pertaining to the operating of the schools and the content of the courses in agriculture and home economics were discussed. Mr. O. S. Longman, Deputy Minister of Agriculture, attended the conference.

Summer Program

There was some increase in the number of meetings held at the schools during the summer of 1952. These institutions offer excellent facilities for gatherings of people connected with rural organizations, and especially for groups of rural young people.

The members of the staff were engaged in a variety of pursuits during the summer. Several were engaged in 4-H Club work, while a number were attached to the Extension Service for the summer months.

Maintenance

The responsibility for maintenance and caretaking at the Fairview School of Agriculture was undertaken by the Department of Agriculture on April 1st, 1952, thus placing this aspect of the operation of all the schools in the same Department.

Two houses for the use of the staff were purchased in the Town of Olds,

and at Fairview construction of several service buildings was begun, viz. a maintenance shop, farm shop, garage, root cellar, granary and live stock shed. The usual amount of redecorating and repairing was done.

School Farms

Excellent crops were harvested at all schools. The yield and quality of the grain was high and fodder and hay crops were good.

The Department purchased a new Shorthorn bull as herd sire at Olds, Killearn Norman 24th, and Dalrene Bar Bardolier 17th was purchased to head the Aberdeen-Angus herd at Fairview. About the end of December a Holstein bull calf, Rochwood Anthony Romonarch, was bought for use at the Olds School of Agriculture.

The 1952-53 Term

Owing to the open fall in 1952, almost all students reported for classes when the schools opened on October 21st. Enrolment in the various classes is given below:

	Olds	Vermilion	Fairview	Total
Agriculture				
1st Year	60	61	43	164
2nd Year	30	42	19	91
Two-in-One	35	18	8	61
	<u>125</u>	<u>121</u>	<u>70</u>	<u>316</u>
Home Economics				
1st Year	17	14	12	43
2nd Year	15	16	6	37
Two-in-One	6	11	-	17
	<u>38</u>	<u>41</u>	<u>18</u>	<u>97</u>

It is regrettable that a further decline in the number of girls enrolled in the course in home economics has to be reported. Many factors account for this situation, but the relative prosperity of the nation is an important one, as it allows young people to marry at an early age. A further factor is the opportunity for girls to obtain some training in home economics at the high school level.

The number of boys practically fills the accommodation. A few applicants were refused admission because of lack of space.

Statistical Report

The following table has been prepared to show the attendance by classes for a number of years at the Schools of Agriculture. The figures used give the number of students in attendance during the fall term. Any discrepancy between the figures and the number of diplomas awarded the following spring would be due to, a) students leaving before graduation, b) students failing to receive a diploma. The table covers the enrolment from the fall of 1945, the year when the Vermilion School was re-opened after being closed for four years during which it was leased to the Department of National Defence.

ATTENDANCE SCHOOLS OF AGRICULTURE AND HOME ECONOMICS
BY CLASSES FOR SCHOOL YEAR BEGINNING OCTOBER 1945

YEAR	AGRICULTURE										HOME ECONOMICS									
	OLDS					VERMILION					FAIRVIEW					OLDS				
	Year of Course		Year of Course		1st	Year of Course		Year of Course		1st	Year of Course		Year of Course		1st	Year of Course		Year of Course		1st
	1st	2nd	1st	2nd		1st	2nd	1st	2nd		1st	2nd	1st	2nd		1st	2nd	1st	2nd	
1952	60	30	35	61	42	18	43	19	8	17	15	6	14	16	11	12	6	-	-	-
1951	54	32	33	61	41	19	36	-	-	27	12	12	21	11	11	15	-	-	-	-
1950	50	42	33	61	40	24				28	17	12	27	19	14					
1949	56	40	28	61	39	28				31	19	16	32	16	13					
1948	56	41	35	61	42	24				36	13	17	34	15	17					
1947	48	30	43	60	32	28				29	14	17	26	20	9					
1946	44	48	37	56	54	32				23	21	20	35	27	10					
1945	66	37	29	76	-	-				35	22	15	38	-	-					

Board of Agricultural Education

The annual meeting of the Board of Agricultural Education was held on June 25th. Considerable time was devoted to a discussion of the report of the committee which studied the relationship of agricultural training in high schools and Schools of Agriculture.

Appreciation

The Schools of Agriculture and Home Economics derive much valuable support from many organizations and individuals. The appreciation of the Schools Branch to other Branches of the Department for assistance and to provincial organizations who provide scholarships, bursaries and prizes is sincerely expressed. The Alumni Association of each school have rendered valuable service in publicizing the courses and encouraging young people to attend.

Youth Training

A new program was introduced during March of 1952 when two Rural Electrification Schools were held at Stony Plain and Stettler. These schools were conducted under the Canadian Vocational Training program of the Federal Department of Labour and the Alberta Department of Agriculture. Officials of the Alberta Power Commission and the Co-operative Activities Branch, Department of Industries and Labour, assisted with the lectures. The power companies provided help in the form of staff and service in supplying necessary wiring and electricity. A number of distributors of electrical equipment not only lent equipment, but sent representatives to the schools to instruct the students.

Each school was of two weeks duration and was limited to twenty students. The age limit was 18 to 30 years. All costs of the schools were shared by Canadian Vocational Training and the Alberta Government. No assistance was given to students for board and room.

In December, 1952 the first of another series of seven Rural Electrification Schools was held at Grande Prairie. This series was to be conducted on much the same basis as the earlier schools, but two instructors instead of one were provided and more equipment was secured locally, rather than depending on distributors. The second series of schools were set up to accommodate thirty students each.

Judging by the interest in the schools held in 1952, this form of training was appreciated by the men who attended. The course material included some theory as well as instruction on the use of electricity on the farm. Elementary wiring, safety precautions and other related aspects of electricity on the farm were considered.

OLDS SCHOOL OF AGRICULTURE

The 1951-52 term closed on April 9th, 1952 with presentation of twenty diplomas in Home Economics and sixty-one in Agriculture. Two students in Home Economics were permitted to write supplementals and were later granted diplomas. Mr. O. S. Longman, Deputy Minister of Agriculture, delivered the address to the graduating class. Mr. John Sinnott, a second-year student from Pincher Creek, was Valedictorian. The average age of students in Agriculture was 19 years, with Home Economics students averaging 17 years of age.

Special Lectures and Visitors

Lectures were given in irrigation, animal sanitation and fur farming to second year and two-in-one Agriculture classes by the following: Mr. C. J. McAndrews, Irrigation Specialist; Dr. J. O'Donoghue, Veterinary Services Branch; Mr. J. Kokolsky, Fur Farm Supervisor.

Representatives of the Alberta Department of Agriculture and other government and commercial agencies who spoke to the students during the year

included: Dr. A.G. McCalla, Dean of Agriculture, University of Alberta; Mr. F.J. Higginson; Miss J. Lewis; Miss C. Judson; Mr. J. Jorgens. Swift Canadian Co.; Mr. Peterson, John Deere Plow Co. Ltd.; Mr. D.A. Andrew, Secretary, Canadian Hereford Association; Mr. E.C. Bealing, Terrill Florists Ltd., Calgary; Dr. Thos Hart, Superintendent of United Church Missions for Northern Alberta; and Mr. J.R. McFall, Secretary, Alberta Federation of Agriculture.

Special Events

January 7	Lectures resumed
February 22	V.S.A. Group visited O.S.A.
April 2	Achievement Day
April 9	Graduation Day
October 21	Registration for fall term
November 28	O.S.A. Alumni Reunion
December 20	Christmas holidays started.

Scholarships

At the closing exercises on April 9th the following scholarship winners were announced:

In Home Economics:

Olive Davidson - O.S.A. Alumni
Edith Jacobsen - Alberta Womens' Institute

In Agriculture:

Wm. Steiner - Imperial Oil
Dave Hall - O.S.A. Alumni
Stan Hooper - Alberta Hatching Egg Producers
Robert McCorkle - Robert Gardiner Memorial
Scholarship
Everett Bennett - Alberta Seed Growers' Co-op
Don Laverty - Surplus Wheat Board Monies Trust
(to University)

Formal presentation of these scholarships, as well as others awarded at summer courses, University Farm Young People's Week and open scholarships awarded to farm young people entering the school in October, was made at the Christmas banquet on December 19th.

Summer Program and Staff Activities

During the summer months when regular classes were not in session, staff members were engaged in various duties connected with the school and other Branches of the Department.

Mr. Malyon was in charge of grounds and poultry; Mr. Belanger continued with his work as Maintenance Foreman; Mr. Cooper was engaged in 4-H Club work, and assisted with summer courses. He was Acting Principal when the Principal was on holidays. H. J. Armstrong was attached to the Field Crops Branch in connection with pest control until the end of June, and assisted Mr. Belanger on maintenance work for the rest of the summer; Mr. Hughes returned to his farm at Vegreville for the summer.

The Home Economics staff was all engaged in women's extension work when not required for short courses at the school.

Summer Events

Twenty-one meetings, conferences or conventions were held at the school during the summer months. Among these events were the Garden Club Leaders' Conference, W. I. Girls' Club Convention, Junior Club Week, Farm Women's Week and 4-H Club eliminations. Total attendance at the twenty-one meetings was estimated at about 2,100 people.

Grounds and Buildings

A good growing season resulted in a very good showing of flowers and shrubs. It also made the task of weed control and grass cutting unusually heavy. Heavy spring run-off demonstrated the inadequacy of drainage on the grounds and four new concrete culverts were put in to correct the situation. Many improvements were made around the buildings, including the redecoration of the second and third floors of the girls dormitory and five classrooms. A new dishwasher and stainless steel sinks were installed in the kitchen and the refrigerators were redecorated. Painting and re-roofing was completed as required and a new cement floor laid in the metal shop.

The Farm

Most of the 1951 crop was threshed in the spring of 1952. Weather was favorable, making it possible to complete the threshing and still get seeding done on time. Spring threshed grain was of poor quality and damage by mice was extensive.

Moisture was plentiful through June and early July, which favored grain crops. Hay crops suffered from dry weather in April and May. Pastures were good throughout the summer.

One hundred ten tons of hay and an equal amount of silage, as well as forty tons of greenfeed, were put up, giving the farm plentiful feed reserves. Both grass and oat silage were put up. Part of it was in the upright silo and part in stack silos. Both hay and silage were handled with the forage harvester. Results with grass silage and stack silos have been quite satisfactory.

Grain crops were for the most part excellent. Seven thousand seventy-four bushels of oats and 3,410 bushels of barley were threshed. Lorain Oats did not fill properly. This is believed to be the result of disease which was reported in other parts of the district, as well.

The live stock have been in good condition throughout the year, with the swine herd doing exceptionally well. The Canadian Yorkshires continue to give more satisfactory results than the English Yorkshires. Demand for breeding stock has been keen with the exception of that for boars. New herd sires were purchased for the Shorthorn and Holstein herds. Eight steers and eight lambs were purchased for October and put on feed along with a few Holstein steers raised on the farm. These are used throughout the winter for butchering classes and meat for the dormitory.

Staff Changes during the Year.

On June 1st, Mr. C. E. Yauch relinquished the position of Principal for health reasons, and joined the staff of the Extension Service at Lethbridge. He was replaced by J. E. Birdsall, who prior to his transfer was Supervisor of Crop Improvement in the Field Crops Branch.

Miss Nora Mitton and Miss Evelyn Elders worked throughout the summer with Women's Extension Branch but resigned to be married before the fall opening of the school. Miss Mitten was replaced as Cooking Instructress by Miss Elizabeth Saint of Amherst, Nova Scotia, and Miss Elders as Home Management Instructress by Miss Ann Kernaeguen, who transferred from the staff of the Vermilion School of Agriculture.

Mrs. Margaret Jorgenson, R.N. (nee McKim), Dean of Women and School Nurse, resigned in April to devote her time to homemaking. She was replaced as Nurse by Miss Rosemary Shaw, R.N. of Calgary. Miss Saint assumed the duties of Dean of Women.

Mr. D. Heimbecker joined the staff on October 1st as Dean of Men and Instructor in Horticulture and Entomology. Mr. V. Molsberry, Instructor in Field Husbandry and Botany, resigned on November 30th to join the field staff of the Chipman Chemical Company. He was replaced by Mr. George Hughes of Vegreville.

Opening of the 1952-53 Term

The school opened as scheduled on October 21. A large number of applications for the Agriculture course had been turned down for lack of accommodation. When registration was completed it was found that several students had failed to register so those on the waiting list were advised and enough came to fill all vacancies. The number of applications for the course in Home Economics again declined.

Final Registration , October 1952

	Home Economics	Agriculture
First Year	17	60
Second Year	15	30
Two-in-one	<u>6</u>	<u>35</u>
Total:	38	125

Staff for the Fall Term

J. E. Birdsall, M. Sc.	Principal, Farm Management
V. E. Molsberry, B. Sc.	Field Crops and Botany (to end of November)
George Hughes, B. Sc.	Field Crops and Botany (after November 30)
M. W. Malyon, B.S.A.	Dairying, Poultry, Mathematics
F. C. Jorgenson	English, Mathematics, Community Organization
R. H. Cooper, M. Sc.	Animal Science
H. W. Sutherland, B. Sc.	Science
K. E. May, B. Sc.	Farm Mechanics
H. J. Armstrong	Metal Work
C. L. Beianger	Building Construction
D. Heimbecker, B. Sc.	Horticulture, Entomology, Dean of Men
T. Hayhurst-France	Accountant
Helen Moseson, B.H.Ec.	Sewing and Clothing
Kathleen O'Callaghan, B.Sc.	Dietitian, Laundering
Ann Kernalguen	Home Management, Home Arts
Elizabeth Saint	Nutrition, Cooking, Dean of Women
Rosemary Shaw, R.N.	Nurse.

VERMILION SCHOOL OF AGRICULTURE

The 1951-52 School Term

Enrolment of students at the end of the term was:

	Agriculture	Home Economics
First Year	56	21
Second Year	41	10
Two-in-one	<u>19</u>	<u>11</u>
	116	42

Guest Speakers

Visitors who inspected the school and addressed students during the term

included: Miss Joyce Lewis, Dr. J. G. O'Donoghue, P. D. McCalla, W. H. T. Mead, Mrs. V. G. Macconald and Miss Margaret K. Fraser, all of the Provincial Department of Agriculture; D. A. Andrew, Secretary, Canadian Hereford Association; Dr. A. G. McCalla and Prof. Grace Duggan, University of Alberta; and W. D. Sharpe, Dominion Income Tax Branch.

Special Events

January 18	Visit of U. of A. Golden Bears Hockey Club
February 9	Visit of U. of A. Ag. Faculty Basketball Team
February 13	Public Speaking Contest
February 17	Visit of Vegreville Badminton Club
February 22 - 24	Visit by delegation of 36 staff and students to Olds School of Agriculture
March 1	Visit by delegation of 35 staff and students to University of Alberta field day
March 15	Presentation of 3 one-act plays Operetta
April 2	"Little Royal" and Achievement Day
April 9	Closing Exercises

The continued interest and support by the public to all open functions at the school continued to afford considerable satisfaction to members of the staff. The "Little Royal" and Achievement Day was attended by well over one thousand persons. Mr. W. H. T. Mead, Provincial Live Stock Commissioner and an exhibitor at the first V. S. A. "Little Royal" held in 1927, was the guest judge.

Graduation

At the closing exercises held on April 9th, the principal address was delivered by Dr. W. H. Swift, Deputy Minister, Department of Education. Mr. R. M. Putnam, represented the Provincial Department of Agriculture and Miss Shiela McCorry of Kitscoty was guest soloist.

Diplomas of graduation were awarded as follows:

	Agriculture	Home Economics
Two-Year Course	38	8
Two-in-one Course	<u>19</u>	<u>11</u>
	57	19

Winners of scholarships for distinction in various fields were named as follows:

The Vermilion Board of Trade - Orest Melnychuk, Norma
The V. S. A. Alumni Association - Donald Briggs, North Edmonton
Irene Hirsekorn, Patience
The Alberta Seed Growers' Co-operative - Korneil Ozyphko, Fedorah
Craig Bros., Vermilion - Rodney Floen, Evansburg
Imperial Oil Limited - Keith McIntyre, Vermilion
The United Grain Growers - Harry Cramton, Strome
Fred Briggs, North Edmonton
Joy Briggs, South Edmonton

The Alberta Women's Institutes - Betty Rost, Hay Lakes

The Robert Gardiner Memorial - Peggy Gedischuk, Westlock

The Alberta Turkey Breeders' Association - Mary Hull, Vermilion

In addition to the scholarships described above, prizes donated by various business firms and organizations to a value in excess of \$400.00 were awarded to students for distinction in various branches of classroom activity.

Winners of the staff medals were Ross Gould, Rosalind; Barbara Jeffery, Glenevis; Terry Bocock, North Edmonton and Georgia Tellier, Morinville.

The Summer Program

The series of short courses held in July was the principal feature of the summer program. A total of seventeen separate meetings or conferences were held during the summer months. Among these events were the V. S. A. Alumni Reunion, Junior Club Week, Farm Women's Week, Vermilion Fair Camp and Anglican Clergymen's Short Course.

The 4-H and the Boys' and Girls' Short Courses employed facilities at the school to capacity and Farm Women's Week attracted a larger attendance than in recent years.

A feature of the V. S. A. Alumni Reunion was the celebration of the Twenty-Fifth Anniversary of Class '27, at which over one-half of the members of that class were in attendance. Mr. W. J. Elliott, Principal of the School at that time, was the specially honored guest speaker.

The Anglican Clergymen's Short Course was offered at the request of the Edmonton Diocese and proved so popular with those who attended that a request has since been received to enlarge the scope another year to include a program in home economics for the ladies while the men study agricultural topics.

Another program for farm young people planned in association with the F. W. U. A. had to be cancelled due to a severe outbreak of poliomyelitis in the Vermilion District.

Numerous organizations, particularly junior clubs, continue to centre many of their activities at the School of Agriculture, where its facilities prove exceptionally suitable for meetings, conventions, demonstrations and field days.

Employment of Staff During Summer

In addition to the responsibilities associated with the summer courses and other events described above, members of the teaching staff engaged in various other activities connected with the school or other Branches of the Department are as follows: T. S. Rackham - Field Crops Branch; R. A. Harvey - Field Crops Branch; E. V. McCrimmon - Provincial Horticulture Station; E. V. Hamula - Dairy Branch; D. C. Folk - Junior Clubs; Miss E. Shemansky - Women's Extension Service; Miss A. Kernaleguen - Junior Clubs.

Supervision of the School Farm was given by V. T. Janssen, who also assisted in the conduct of numerous junior live stock club shows. Grounds, garden and field crops plots at the school were supervised by the Principal.

Agreement with Vermilion School Division

During the summer of 1952 an agreement was contracted with the Vermilion School Division whereby facilities of the School of Agriculture as well as two members of the teaching staff would be employed in providing courses in Home Economics and in General Shop for pupils attending the Vermilion and Kitscoty Public and High Schools during those parts of the school term when the regular courses at the Schools of Agriculture were not in operation. This agreement went into effect September 1st, with Miss G. Sinclair as Instructress in Home Economics and Mr. D. C. Folk as Instructor in General Shop. Under terms of the agreement the School Division will reimburse the Department of Agriculture for these instructors' salaries for the periods employed and will pay for use of the shop and laboratory facilities.

The arrangements appears to be working out most satisfactorily and has evoked a considerable amount of favorable comment by local citizens as well as Department of Education officials.

Buildings and Grounds

A normal program of maintenance and repair was conducted through the summer months with most of the work being done by the regular maintenance staff. Major projects included installation of new floors in the gymnasium and in the field crops and horticulture laboratories, repairing and redecorating several classrooms and rooms in the dormitory, installation of 300 feet of concrete curbing in front of the dormitory and installation of roadside tree plantings along the north side of Highway 16 and the west of Highway 41.

The School Farm

The growing season was characterized by an exceptionally dry spring, highly favorable moisture through June, July and August and practically no moisture during the fall months. Consequently pastures were poor in the spring, hay crops were light and difficult to harvest and cereal crops produced good yields. Crops harvested were as follows:

	Wheat	Oats	Barley	Hay
Acres	-	74	39	112
Yield	-	4120 bu.	2380 bu.	163 tons

Principal additions to the farm equipment were a Cockshut 40 Tractor and a Gehl Forage Harvester.

The 1952-53 Term

Classes were enrolled on October 21st as follows:

	Agriculture	Home Economics
First Year	61	14
Second Year	42	16
Two-in-one	<u>18</u>	<u>11</u>
	121	41

Enrolment in the Agriculture classes is highly satisfactory and coincides with the accommodation, but the enrolment in First Year Home Economics is much less than in any previous recent year and employs less than one-half the accommodation available for this class. The fact that this trend has been developing over five or six years is further cause for concern.

The school has enjoyed fine support from numerous business firms and organizations who have donated a very considerable quantity of material and equipment for teaching and demonstration purposes without which our work in farm mechanics and home management would be considerably handicapped.

Instruction and administrative staff was as follows:

N. N. Bently	Principal, Instructor in Farm Equipment
V. T. Janssen	Instructor in Animal Husbandry, Farm Superintendent
E. V. McCrimmon	Dean of Men's Residence, Instructor in Horticulture and Botany
*J. A. R. Palin	Instructor in Farm Mechanics
D. C. Folk	Instructor in Farm Buildings
K. Stone	Instructor in Field Husbandry
*W. R. Olsen	Instructor in Metalwork, Maintenance Superintendent
*L. Seath	Instructor in Science
E. V. Hamula	Instructor in Dairying and Poultry
*Walter Hughes	Instructor in English and Community Organization
*Miss M. Davies	Dean of Women's Residence, Dietitian
*Miss G. Sinclair	Instructress in Clothing and Sewing
*Miss M. Jackson	Instructress in Home Management, Handicrafts and Laundering

*Miss A. Randle	Instructress in Nutrition and Cooking
Miss S. Komhyr	Instructress in Home Nursing, School Nurse
J. R. Roxburgh	Accountant
Mrs. K. I. Bell	Secretary
*Mrs. M. Carruthers	Librarian

(* denotes new member of staff at beginning of fall term)

The large number of new staff members needed each year indicates an important problem in obtaining and retaining adequately trained experienced instructors for the responsible and exacting work required in a school of this type.

FAIRVIEW SCHOOL OF AGRICULTURE

At this writing, the school has completed its first year of operation and commenced its second. While it is still early to make any detailed analysis of the value of a School of Agriculture and Home Economics in the north country, there is a very keen and widespread interest in the school throughout the Peace River area. The basis for this observation is the number of visitors who ask to be conducted through the school during the year and the inquiries regarding the work of the school which are handled through the office. Tangible evidence of interest is shown in the increase in total enrolment from 51 in 1951 to 88 in 1952.

Visitors and Special Speakers

During the fall term a number of visitors met the student and had an opportunity to inspect the school. These included Mr. Solon Low, M.P. ; Mr. W. F. Gilliland, M.L.A. ; D. H. McCallum, Dairy Commissioner; R. P. Dixon, Dairy Branch; A. W. Beattie, District Agriculturist of Berwyn; Dr. A. G. McCalla, Dean of Agriculture, University of Alberta.

From the School Calendar of Events

January 19th	Carnival
January 26th	Literary program
February 9th	Sports Night
February 16th	High School Bonspiel
March 7th	Spring Open Dance
March 22nd	Gym Night
April 2nd	Achievement Day
April 9th	Closing Exercises.

Any functions at the school open to the public were very well attended. Notable was the attendance at Achievement Day when the students projects for the term were displayed.

The "Little Royal" stock show, also scheduled for April 2nd, was cancelled due to the extreme difficulty of carrying on under Foot and Mouth Disease precautionary measures.

Closing Exercises

Closing exercises were held on April 9th, Mr. E. B. Swindlehurst represented the Department and also delivered the principal address. Since only first year work was offered during the first year there were no students to be graduated.

The winners of scholarships for outstanding work in various fields were named as follows:

The W. P. Loggie Scholarship, tenable in the second year course
 - Albert Eggenberger, Manning,
 Gladys Brown, Beaverlodge.

The Alberta Seed Growers' Scholarship - Lloyd Hoescherl, North Star
 The Alberta Women's Institutes Scholarship - Marion Burgess, Beaverlodge
 The F.U.A. Robert Gardiner Memorial Scholarship - Ramona Caspar, Fairview

Very substantial support was given to the school by local business men through the medium of special prizes which totalled \$ 205.00.

During the year the first school paper was published by the students and a full program of other extra-curricular activities was organized under the direction of the Students' Council with supervision by staff members.

Harry Holt of Peace River won distinction at the Royal Winter Fair, Toronto, winning the Reserve Barley Championship, and also winning the Barley Grande Championship at the International Hay and Grain Show at Chicago.

The Summer Program

The summer program featured a series of short courses as follows:

		Attendance
July 2nd to 5th	Community Life Week	1 07
July 7th to 10th	Farm Women's Week	69
July 21st to 26th	4-H Club Week	70

Other meetings held at the school during the summer and early fall included the Elite and Registered Seed Growers' School on July 31st, the North Peace Teachers' Convention on September 22nd and 23rd and the Peace River Locker Plant Association Operators' Conference, October 29th. Members of the Grade 1X class, Grimshaw intermediate school toured the school on February 8th. Miss E. M. Sanford gave a short course in sewing for 34 ladies of the district.

Employment of Staff During the Summer

In addition to assisting with the work in connection with short courses, members of the teaching staff were engaged in work at the school or in other Branches of the Government service.

H. F. Irwin was employed by the Field Crops Branch as Weed Supervisor for the Peace River area with headquarters at Fairview; C. E. Paquin transferred to the Department of Lands and Forests as an Inspector of Lands with headquarters at Fairview.

Miss O. M. Gerrard, Miss E. M. Sanford and V. W. Osbaldeston spent part of the summer with the Extension Service. W. R. Knight was in charge of maintenance and supervised construction of new buildings at the school for the Department of Public Works. D. R. Macpherson and G. A. Ogston were engaged in operation of the School Farm as Farm Manager and Farm Foreman respectively. D. A. Russell was occupied with planning and planting the school grounds, the planting and maintenance of cereal plots for classroom material and was also responsible for raising vegetables for dormitory use. E. Gabriel continued as boilerman on a full time basis. His giving instruction in black-smithing and welding in no way interfered with his regular duties.

Miss L. E. Engberg transferred to the Extension Service and was replaced by Miss G. M. Graham. Miss O. M. Gerrard was Dietitian for the summer short courses.

Miss H. T. Stelfox left the service due to ill health and was replaced by Miss D. M. Hoel. W. K. McKenzie left the service and was replaced temporarily by H. Civil and in the fall by P. Shankowski.

Buildings and Grounds

As of April 1st, 1952, responsibility for the maintenance of school buildings passed from the Department of Public Works to the Department of Agriculture. With the operation of utilities, repairs to buildings and direction of janitor services coming directly under the supervision of the Principal, more

effective use of personnel and a greater measure of co-ordination between the maintenance and use of buildings and installations was made possible.

Capital projects included: installation of water softening and filter unit; completion of a storm sewer line; gravelling and ditching of a parking area and all roads on the grounds and the installation of culverts; construction of a maintenance shop; partial construction of a ten-stall garage, stock feeding shed, farm workshop and root cellar; grading and application of top-soil to the main grounds area; laying of concrete aprons at the dormitory service entrance and at the main entrance.

After one full season of operation repairs required in the dormitory were very few. Considerable maintenance work was done to the farm buildings by way of improving feed storage bins.

Under the direction of D. A. Russell excellent progress was made in grounds development. All main lawns were seeded and a good stand secured. Shrub planting in front of the dormitory was begun and with the use of annual flowers a very pleasing effect was produced. Nursery stock brought in has so far done very well. Planting will be extended in 1953 and with the establishment of the new highway on the north side of the property windbreaks will be established. Suitable material is on hand to continue this work.

The School Farm

More favorable growing conditions in 1952 gave better crop returns than in 1951. Oats yielded 60 bushels per acre for a total of 2,432 bushels. Barley produced 33 bushels per acre with a total of 1,346 bushels. No wheat was grown since all available land is required for coarse grains, hay and pasture. The only grain purchased was feed wheat for poultry. Hay production totalled 29 tons and 17.5 tons of greenfeed was harvested. It is proposed to improve tilth and productivity of the farm by systematically seeding fields to suitable grass and legume mixtures for hay and pasturing. As part of this program the third field of approximately 35 acres was seeded down.

The Aberdeen-Angus herd wintered well and came through the summer in reasonably good condition in spite of a shortage of pasture. Local demand for 1951 bulls was only fair. Three were sold through the Live Stock Branch to local farmers and two were carried over. Three steers were carried over for teaching and dormitory use. All 1951 heifers were sold outside the Peace River area due to lack of local demand. A new sire was obtained for the Aberdeen-Angus herd.

In general, the loose housing dairy barn is proving to be quite satisfactory. Production of the dairy herd has been, for a variety of reasons, somewhat disappointing. However, a substantial quantity of milk was available for dormitory use. Cream was sold during the period when the dormitory was not in operation. Very little interest has been shown locally in Holstein bull calves for breeding purposes.

A considerable number of hogs have been marketed in addition to those sold to the dormitory. It is anticipated that there will be considerable local demand for swine breeding stock.

A flock of 100 New Hampshire pullets and 56 birds of other breeds were obtained in October. These are doing well and supplying eggs for the dormitory as well as being available for teaching purposes.

The 1952-53 Term

The fall term opened on October 21st delayed by one day to coincide with train arrivals in Fairview. Enrolment was almost completed within three days. Class enrolment was as follows:

	Agriculture	Home Economics
First Year	43	12
Second Year	19	66
Two-in-one	8	--
	<u>70</u>	<u>18</u>

All fully eligible applicants were accepted. Dormitory accommodation is limited to 78 boys. Enrolment in the second year of operation would indicate that the course in Agriculture will attract a near-capacity number of boys. With accommodation for 36 girls available it is apparent that there is room for increased enrolment in the Home Economics course. On a comparative basis the situation is about the same as has existed in the schools at Olds and Vermilion in recent years.

Instruction and administration staff was as follows:

J. E. Hawker	Principal, Instructor in Community Organization and Public Speaking
D. R. Macpherson	Farm Manager, Instructor in Animal Husbandry
D. A. Russell	Dean of Men, Instructor in Horticulture, Botany and Physical Education
V. W. Osbaldeston	Instructor in Farm Motors and Farm Machinery
W. R. Knight	Chief Caretaker and Instructor in Farm Buildings
C. E. Paquin	Instructor in Science
H. F. Irwin	Instructor in English, Mathematics and Entomology
J. T. Lancaster	Instructor in Field Husbandry and Farm Management
J. H. Warne	Instructor in Dairying and Poultry
G. A. Ogston	Farm Foreman and Assistant Instructor in Animal Husbandry
E. Gabriel	Instructor in Metalwork
Miss G. M. Graham	Dietitian, Dean of Women, Instructress in Home Management
Miss E. M. Sanford	Instructress in Sewing, Handicrafts and Textiles
Miss O. M. Gerrard	Instructress in Cooking and Nutrition
Mrs. L. A. McDougall	School Nurse and Instructress in Home Nursing
P. Shankowski	Accountant
Miss D. M. Hoel	Secretary
Mrs. E. Rae	Librarian

REPORT OF JUNIOR ACTIVITIES AND YOUTH TRAINING BRANCH

G. S. Black, Supervisor, Junior Activities and Youth Training

Margaret K. Fraser, Supervisor, Girls' Club Work

C. L. Usher, Assistant Supervisor, Junior Activities.

GENERAL

The year 1952 has been a most successful year in junior work. Although not greatly increasing in membership, club work continues to expand in the scope of its activities. The further expansion of club work within the province will depend upon the successful leadership given by the voluntary club leader. Efforts are being given in training and assistance by regional as well as provincial club leaders conferences.

Junior Club Week at each of the three Schools of Agriculture continues to be a major club event. Provincial plot competitions created a new high in interest and quality of work and the international trip to Bozeman has stimulated group visits from Montana to the southern clubs of Alberta. More and more clubs are holding rallies or taking club tours within the province. Successful camps continue to be well attended.

Alberta representatives at the National Contests again had a very successful year. For the third year in succession, an Alberta junior grain club member won the world's wheat Championship and the first prize in the oat and barley classes.

Live stock club members had a most successful year in both the beef and dairy projects. Prices received were lower in all cases but in turn were higher than the commercial market. The number of dairy clubs remains about the same while the membership has increased slightly. Poultry clubs are showing a very keen interest and some very excellent clubs are now operating.

Mr. C. L. Usher has again proved a very capable assistant. Miss Margaret K. Fraser was assisted by Miss Anne Kernaleguen and Miss Evelyn Elders. Staff members of the Schools of Agriculture were used for part time work. Miss O'Callaghan and Messrs. Folk, Pettem and Cooper assisted in club work during the summer months.

The following is an analysis of each project:

ALBERTA'S JUNIOR CLUBS, 1952

	No. of Clubs	Membership
Beef	100	1,679
Dairy	22	369
Poultry	10	146
Sheep	1	19
Wheat	61	1,010
Oats	37	625
Barley	45	674
Forage	13	180
Potato	1	15
Clothing	87	737
Foods	13	73
Gardening	59	721
Home Decorating	8	46
Total	457	6,294

Following the change of title by the Canadian Council on Boys' and Girls' Club Work to the Canadian Council on 4-H Clubs, Alberta changed the name of her clubs to 4-H clubs as did the other provinces. This widely known title has been favourably accepted across the province.

LEADERS' COURSES

Two provincial and four regional leaders' courses were held. The garden club leaders attended the Olds School of Agriculture in April just prior to starting their projects. The provincial club leaders' two-day conference was again well attended and very well received. At this latter course 112 were registered.

Regional one-day leaders' courses were held at Stettler, Lethbridge, Calgary and Camrose. All were well attended. This type of a course enables delegates to study problems affecting clubs in their area which in turn assures uniformity in club procedure. Applications have been received from twenty District Agriculturists this winter for similar conferences this winter.

JUNIOR CLUB WEEK

With the opening of the Fairview School of Agriculture this year, Junior Club Weeks were increased to three. The efficiency winner from each club is entitled to attend Club Week at a School of Agriculture the following summer. Thus 426 were eligible for club week during 1952. The revised club week's programme of work and play proved very satisfactory. Seven scholarships from the Wheat Board Monies Trust were awarded as follows:

Olds:

Home Economics: Olive Hurl, Mossleigh
 Jean Finlayson, Munson
 Grain: R. Leonhardt, Drumheller
 F. Mehlhoff, Whitla
 Live Stock: L. Hockstein, Pincher Creek
 R. Hymas, Rosebud

Vermilion:

Home Economics: Joyce Atkinson, St. Albert
 Margery Armstrong, Highridge
 Grain: Harvey Appelt, Spruce Grove
 Peter Nowakowski, Clandonald
 Live Stock: Bernie Kolodychuk, Ryley
 Bruce McDonald, Mannville

Fairview:

Home Economics: Bernadette Cimon, Donnelly
 Beatrice Brandon, Hines Creek
 Grain: Paul Houde, Falher
 Dennis Payeur, White Mountain
 Live Stock: Arvid Olderskog, Valhalla

INTERNATIONAL TRIPS

For the sixth consecutive year 4-H club members were again selected to represent Alberta at the 4-H Club Congress in Bozeman, Montana. This is an exchange project whereby a similar number of members from the state of Montana attend one of our Junior Club Weeks. This year the 4-H club members were the guests of the Department of Agriculture at the Olds School. The Calgary Exhibition and Stampede Association again acted as hosts to the members at their summer exhibition for one day. The Alberta delegation this year was composed of: Marlene Clark, Lloydminster; Jeanne Finlayson, Munson; John Sheperd, Erskine; Jim Mouser, Claresholm. They were accompanied by Miss P. Seldon, Home Economist from Grande Prairie, and Mr. G. W. Shewchuk, District Agriculturist at Spirit River. Very complimentary reports were received and an excellent impression made by the Alberta members on this visit.

PROVINCIAL JUDGING COMPETITIONS

Late in July of each year two days are devoted to selecting the teams which shall represent Alberta at the National Contests. Each District Agriculturist is entitled to bring one team from his district in each project to this contest. Under Canadian Council regulations, Alberta is entitled to enter teams in seven projects. The following teams were successful in winning the Provincial Competitions:

Clothing -- Vivian Peterson and Doris Scheidegger, Ohaton
 Food -- Jean Coutts and Jessie Wagner, Nanton
 Garden -- Barbara Foster and Elaine Primus, Alix
 Grain -- Bernie Kolodychuk and Fritz Munkedal, Ryley
 Beef -- Reed Francis and Alan Warner, Tofield
 Dairy -- Ernest and Melba Koetke, Holden
 Poultry -- Bruce McDonald and Christina Morrison, Vermilion

A scholarship is awarded to the team standing second in each project at the Provincial Contests. The following teams are entitled to attend a School of Agriculture for Club Week in the summer of 1953:

Clothing -- Margery Robertson and Marlene Clark, Lloydminster
 Food -- Donna Kneller and Martha Schmidt, South Edmonton
 Garden -- Rose Marie Hood and Jacoba Kampjes, Gibbons
 Grain -- Waldemer Rimer and Otto Itterman, Warburg
 Beef -- Edgar Robinson and George Edgar, Innisfail
 Dairy -- Keith Viney and Bob Armstrong, Olds
 Poultry -- Kathleen Green and Shirley Anderson, Meeting Creek

NATIONAL JUDGING COMPETITIONS

The National Club Contests were again held on the opening day of the Royal Winter Fair. Alberta made an excellent showing, securing three firsts, one third, two fourths and one sixth. The following are the placings of the Alberta teams:

Clothing -- First: Vivian Peterson and Doris Scheidegger, Ohaton
 Food -- First: Jean Coutts and Jessie Wagner, Nanton
 Garden -- First: Barbara Foster and Elaine Primus, Alix
 Poultry -- Third: Bruce McDonald and Christina Morrison, Vermilion
 Beef -- Fourth: Reed Francis and Alan Warner, Tofield
 Grain -- Fourth: Bernie Kolodychuk and Fritz Munkedal, Ryley
 Dairy -- Sixth: Ernest and Melba Koetke, Holden

Doris Scheidegger of Ohaton Clothing team and Jean Coutts of the Nanton Food team won high individual honors in their projects.

Bruce McDonald, a member of the Vermilion Poultry Club, was elected President of the Junior 4-H Club Council. This is considered a very high honor in club work.

CAMPS, RALLIES AND SHORT COURSES

These events continue to expand and are yearly becoming more important phases of club work. Practically all of our junior clubs now include club tours and club rallies in their programmes. A cavalcade of over twenty cars brought 4-H club members from Montana on a two-day visit in the Lethbridge - Cardston district this summer. The camps held at Handhills, south of Medicine Hat, was well attended and is becoming a club must. "B" class fairs at Lethbridge, Camrose, Vermilion and Vegreville held three day camps at their annual exhibitions, Edmonton Exhibition holding both a club rally and a five day camp. The Red Deer Exhibition made the first day of their fair a distinctly junior event. A pronounced interest is being shown in supervised camps where sports activities play a prominent part in the picture.

RADIO

4-H club news is relished by all of the radio stations within the province and a large number of their programmes contain club material supplied by our office. A junior club programme of fifteen minutes duration is given periodically over C.K.U.A. and members of the staff are occasionally interviewed. Special events such as achievement days, club rallies, provincial elimination contests and National Club Week are put over the air from a number of stations.

PINS, CRESTS AND UNIFORMS

Club members continue to purchase, through our branch, uniforms, crests, and pins. With the changing of the name of the club movement, it has been necessary to purchase new crests and pins in all cases. Uniforms remain the same as Alberta colours of maroon and white have not been changed.

4-H CLUB FILM

A very considerable amount of time has been spent by this branch on the making of a junior club film. All club activities have been included and it is hoped to have same available early in the new year. Appreciation is expressed to the sponsoring organizations who have assisted very materially in the financing of this film, which will be a record of club activities within our province.

JUNIOR CLUB BULLETIN

A junior club bulletin is issued periodically and forwarded to each club member. Due to the pressure of other work we were unable to print as many issues as we desired this past year. The club bulletin is a distinct club effort and the quality of the bulletins issued is of a high standard and it is well illustrated.

ALBERTA JUNIOR CLUBS (1942 to 1952 inclusive)

Project	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952
Swine	21	13	12	7	1	3	2	1	2	2	--
Beef	38	37	42	47	56	73	88	81	83	89	100
Dairy	10	10	11	15	14	18	25	25	26	23	22
Poultry	6	8	--	--	2	3	1	1	2	4	10
Sheep	--	--	--	--	--	--	--	--	--	--	1
Wheat	40	23	19	21	34	42	38	50	66	70	61
Oats	22	30	26	19	24	17	22	26	29	40	37
Barley	33	30	26	15	16	26	28	22	20	27	45
Potato	--	3	3	2	8	2	--	1	1	2	1
Forage	--	13	19	14	10	15	13	11	16	12	13
Garden	8	8	11	20	27	30	37	39	47	52	59
Clothing	55	41	44	60	61	52	71	74	72	87	87
Foods	5	2	1	2	3	4	2	8	16	12	13
Home Decoration	--	--	11	5	2	4	--	4	4	4	8
Etiquette	--	--	--	--	--	--	--	--	--	2	--

AGRICULTURAL PROJECTS

The objective of all junior clubs can be summed up in two sentences --

1. The education of rural youth in Agriculture
2. Training in citizenship as a means to interest club members in home and community life and to develop those qualities of character that are needed for leadership.

The various projects under which clubs are organized allow for the member to learn to do by doing. It, therefore, behooves us to create and maintain an active interest in the project in order that at regularly held club meetings educational work can be brought forward for assimilation by the members.

BEEF CALF CLUBS

These clubs continue to be the most popular and will continue to do so for several reasons -- returns on the cash outlay and public interest and support. Lessons on many phases of agriculture are part of the yearly programme.

Achievement Days continue to be outstanding agricultural events in many districts. The glamour of a well conducted auction sale appeals to the buyer and club member, resulting usually in prices considerably over market being paid. Grateful acknowledgement is given for the services of members of the Live Stock Branch, Schools of Agriculture and private individuals who have contributed to this work.

DAIRY CALF CLUBS

Although this type of live stock club should only be organized in districts adapted to successful dairying, I think we should realize that the number of junior clubs which can be organized by our District Agriculturists has reached their maximum. The demand for their services in other activities limits the further increase of 4-H clubs. For a long period an insufficient supply of dairy calves prevented dairy calf club expansion. This condition has been rectified but as previously stated, new clubs are not being organized in this project.

The sixth Provincial Junior Dairy Show was held in conjunction with the Red Deer Exhibition. The quality of animals shown is better and this display does create very much interest. Miss Melba Koetke of Holden and Robt. Clark of Didsbury won the yearling and calf championships respectively and were presented with suitable trophies by the Minister of Agriculture at the conclusion of this event.

The Holden Dairy Calf Club was awarded the Kiwanis trophy of South Edmonton for being the most efficient club in 1951.

POULTRY CLUBS

An increased membership is noted in Poultry Clubs -- ten clubs now have chicken or turkey projects. Their year's work being climaxed with very successful achievement days.

CROP CLUBS

Junior Crop Clubs can again report a very successful year. A distinct improvement is noted in the quality of the achievement days being held. Many districts are now holding combined achievement days at central localities. Inter-club contests, coupled with thematic displays, have created greater interest within the district.

The Provincial Plot Competition was keenly contested. The best plot in each project within a District Agriculturists district competes for the Provincial championship. The 1952 championships were awarded as follows:

Wheat -- Ken Leuf, Three Hills
Oats -- Peter Nowakowski, Clandonald
Barley -- Mae V. Hill, High Prairie

ROYAL WINTER FAIR

Alberta 4-H club members again made an impressive showing at Toronto. In the spring wheat class, the top three awards were won by Alberta club members, as well as the top awards in both classes of oats and in the barley class.

Ronald Leonhardt, Drumheller, was crowned wheat king and Ricky Sharpe former wheat king, took the reserve award, this being the third consecutive year in which a 4-H club member has won this coveted award.

ANNUAL REPORT OF GIRLS' CLUB WORK

The Girls' Club program is again providing instruction in homemaking to a large number of girls in rural areas of Alberta. There were 150 clubs carrying projects in 1952 with a membership of 1863.

The interest in this work is being maintained and the standard of work being done by the girls is improving. This year many of the club leaders and assistant leaders are former club members and many are graduates of one of the Schools of Agriculture.

Projects

Twelve projects are now outlined - 3 in Clothing, 3 in Foods, 3 in Gardening, 2 in Home Decoration, and 1 in Etiquette. The Clothing projects are still very popular with 71 clubs completing projects. Food projects are slowly gaining in popularity. 15 clubs completed projects this year and indications are for a considerable increase in this number next year. The Home Decoration projects are for more advanced clubs and so are not as widely carried. The Garden projects are sponsored jointly by the Alberta Wheat Pool and this Department. Fifty-seven clubs took the Garden project this year.

Besides the instruction available from the project books, 373 lectures in Home Economics and club work were given to the club members by the District Home Economists and 50 by the Girls' Club Supervisor. One hundred and thirty-nine Achievement Days were held with 7001 people attending.

A great deal of assistance in preparing and carrying out the projects in Food and Home Decoration is given by the specialists in this field, Miss Lewis, and Miss Judson. This is of much value to the club members and is greatly appreciated.

Awards

All garden club plots were judged by the District Home Economists with assistance from the District Agriculturists of Alberta Wheat Pool Fieldmen. The Alberta Wheat Pool awarded 54 prizes for the best garden plots in each club and presented 14 clubs with awards for obtaining the highest standing in each District Home Economists district. These last were in the form of a book to be added to the club library. This is the third year in which books have been awarded to the best club in each district.

- 1950 - " Garden Encyclopedia "
- 1951 - " Vogue Book of Etiquette "
- 1952 - " Herbs - their culture and use "

If a club disbands, these books are returned to the District Home Economists' office to be available for loan to all clubs in the district.

The T. Eaton Company awarded prizes to the member of each club carrying a Food, Clothing or Home Decoration project, who placed highest on the basis of club work and project work. These awards are in the form of pinking sheers to the Clothing and Home Decoration clubs and timers to the Food Clubs. Seventy-three awards were made in Clothing and Home Decoration and 8 in Foods.

The Alberta Wheat Pool awarded two scholarships to the value of \$200.00 each this year. These were to students in first and second year in Home Economics at the University of Alberta.

The second year scholarship was awarded to:

Miss Betty Brown - NANTON

and the first year scholarship went to:

Miss Arlene Nelson - VETERAN

The following girls were awarded scholarship at the 4-H Club Weeks:

1. Olive Hure - Mossleigh
2. Jeanne Finlayson - Munson
3. Joan Atkinson - St. Albert
4. Margery Armstrong - Highridge

5. Bernadette Cimon - Donnelly
6. Beatrice Brandon - Hines Creek

Other Activities

This year again a Garden Club Leaders Course was held in April to train the leaders for this work. 56 Leaders took advantage of this course. A three day Sewing Course was offered to leaders of clubs carrying Clothing projects. Thirty-nine leaders attended this. It is hoped that this year a special course can be provided at the same time for leaders of Food Projects. There have been many requests for such a course. The regular Leaders Course was also well attended.

In addition to this 80 leaders meetings were held in the various districts this year. Many of these were attended by the District Home Economists and the Girls' Club Supervisor and others only by the District Home Economists. Some of these were in the form of district meetings attended by all the leaders in the district and in other instances the District Home Economist visited the Club Leaders and gave them direct assistance with their work. 4 district leaders meetings were held jointly with the Agriculture club. This type of meeting has proven a great asset as it helps to train the leaders and makes for better work done by the clubs and less time spent on them by the District Home Economists.

Teams were sent to National Club Week in Toronto representing Food, Clothing and Garden projects.

Food - Jean Coutts

Jessie Wagner - NANTON - 1st.

Clothing - Vivian Peterson

Doris Scheidegger - OHATON - 1st.

Gardening - Elaine Primus

Barbara Foster - ALIX - 1st.

The girls who attended National Club Week this year gave their demonstration and talks on club work and their trip to National Club Week twenty-five times. These were mainly to new audiences to interest them in the work and to assist in the organizing of new clubs.

There has been a great increase in the number of events for club members this year. Fifteen rallies, 56 tours and 8 short courses and 6 fielddays were held. Also a number of club members attended the 4 Fair Camps. These events have proven very useful in creating club interest and giving instructions to assist in project work. Four thousand six hundred and thirteen people attended events of this type exclusive of Achievement Days.

This year 186 former club members were given assistance in homemaking, educational and vocational problems.

Aims

The big problem in clubwork is to obtain, train, and maintain good leaders. This problem is being met in the following ways:

1. Leaders courses on a Provincial regional and district basis. It is hoped that more regional and district courses can be held next year.
2. Camps and short courses where older club members can be given instruction in leadership and project work. Short courses are all well attended. At 4-H Club Weeks this year, workshops in various phases of club activities were carried on. In this way some training was given to all Efficiency Winners so they could in time give their club assistance in the work they undertook.
3. Junior Leaders - A system of junior leaders is being started with the view to training future leaders. These are members over 16 years of age who have completed at least 3 projects and who have been Efficiency Winners. They are required to carry a club project but also are given credit for doing leadership work with the younger club members in some one field of their work. This year 36 club members enrolled as Junior leaders and helped their club greatly besides gaining valuable experience for themselves.

The aim of Girls' Club Work is to encourage rural girls to adopt up-to-date methods in homemaking, to interest them in improving their standard of work and to encourage them to take part in community activities. Displays at Achievement Days, reports of District Home Economists, results of judging competitions and the number of club girls attending Schools of Agriculture and University indicates that to some measure at least these aims are being met. In addition to this the following work was done by the Girls' Club Supervisor:

	No.	Attendance
Meetings attended	50	3579
Short Courses & Fielddays	50	3870
Conventions & Fairs	9	1120
Fair Camps	4	
Radio Talks	6	
Letters written	1885	
Phone calls	290	
Office interviews	160	
Home visits	74	

The Short Courses included 10 days spent at Farm Young Peoples Week sponsored by the Department of Extension, University of Alberta, acting as dean of women and giving instructions to the girls.

6857 Project books were distributed and leaflets.

This year Miss Anne Kernaleguen and Miss Evelyn Elders assisted in the girls section of the 4-H program from May until September. Their help was of great benefit not only in the various activities held during that time, but also because they were able to visit many clubs and help in the preparation of a great deal of material.

PROVINCIAL HORTICULTURAL STATION

Brooks, Alberta

P. D. Hargrave, Superintendent

ADMINISTRATION

The major undertaking at the Horticultural Station was in connection with establishing headquarters at the new location east of the town of Brooks. This involved moving trees and shrubs, planting windbreaks, developing roads and improving irrigation facilities.

Spring moisture conditions were excellent and were followed by early summer rains and dry weather during the late season. These climatic factors reduced irrigation to a minimum, produced good tree growth and a heavy crop but extra cultivation and hoeing were necessary. Backsloping of roads and building fences were carried out in preparation for roadside plantings. Boundary shelterbelts of willow and poplar were started along the west side of the farm and two field shelters were planted. 3,600 trees were used in this development. Twenty-seven blocks of 50 trees each were planted as additional shelter and a future source of seed and cuttings.

The road from the north entrance was graded and gravelled. Two Texas gates across this road give access to the farm and new headquarters. Ditch bank willows were removed from the north drainage ditch and the east supply ditch in preparation for levelling and rebuilding. A concrete spillway was completed on the main delivery ditch. Pumping units were transferred to the new farm and a portable gasoline unit added as a source of power. One tractor was replaced. Haying, cultivating and harvesting equipment was rented.

For the second consecutive year labor costs increased although the total hourly labor was reduced by more than 1,000 hours.

CLIMATE

1952 had a frost free period of 164 days, with the last frost of the spring occurring on April 23rd and the first killing frost of the fall on October 4th. -- Although the season was comparatively long, tomatoes, cucumbers and other hot season crops did not do well because of cool weather in June and July. Snow cover was heavy during the winter months and spring was early with the first fruit blossoms appearing on April 18th. The autumn was open with only a trace of precipitation during October, November and December. The following table gives the temperatures and precipitations for the year:

Month	Maximum	Minimum	Av. Maximum	Av. Minimum	Precipitation
January	42	-27	9.42	- 7.10	.52
February	48	- 23	27.90	6.00	.68
March	49	- 17	27.74	2.90	.97
April	82	19	62.00	31.80	.10
May	77	31	66.77	39.48	.70
June	83	36	69.17	44.77	3.91
July	87	41	71.10	49.42	2.11
August	90	35	73.84	43.71	4.14
September	82	30	69.67	39.97	.48
October	78	16	61.71	27.23	--
November	69	- 8	42.60	16.97	.34
December	57	- 3	33.13	10.26	--

Total 13.95

MULTIPLICATION AND DISTRIBUTION OF NURSERY STOCK

The planting of tree seeds in seeding frames was earlier than usual and good seedling stands were obtained with the exception of evergreens. Most kinds of seeds planted were stratified. In general favorable results were obtained from greenwood cuttings, however it was noted that their rooting ability depended to a considerable extent on the time of the year the cutting was made.

Over 9,000 stocks were budded. These consisted of 6,800 apples and 2,300 plums and plum hybrids. The severe winter of 1951-'52 damaged much of the stock budded in 1951, and in some of the varieties none of the buds survived the winter.

Tree seeds were difficult to obtain owing to winter and spring conditions killing many flowering buds. Seed production of native fruits has been very irregular and hardy varieties of introduced stock have given little or no seed for the past three year period. This was particularly noticeable in *P. tomentosa*, *Amelanchier* species, hybrid plums and cherries. Two trips were made to the Red Deer river valley to collect bullberry seed.

468 pounds of tree seeds of all kinds was planted as compared with 457 pounds in 1951. Hardwood cuttings for windbreak material were collected the latter part of March and planted during the last week of May. These totalled 68,000 poplar and 99,000 willow. From this lot 10,000 rooted whips were dug in October and heeled in for shipment this coming spring. A planting experiment using a Roto-tiller in place of a row-marker appreciably increased the rooting percentage of the cuttings.

The Station supplied 221 applicants with a total of 58,800 plants. These consisted of various fruit trees, ornamental bush and windbreak material. A large number of cuttings and field grown seedlings were also supplied to farmers for shelterbelt planting.

Introductions of new kinds and varieties of plants to the Station included 58 kinds of lilacs from the Morden Experimental Stations, 500 new ornamentals, 113 apples and hybrids, 21 apricots, 57 plums, 9 cherries, 30 currants and 12 gooseberries. These were planted at the new station for testing and propagation purposes.

ORCHARDS

Small fruit testing received special attention. Varieties in the Station collection were replanted and 19 varieties of strawberries, 25 currant varieties and 15 gooseberry varieties were introduced.

The first tree fruit orchard was established on the new headquarters farm. It was planted to 173 varieties.

Fire-blight made its first appearance in the orchards. When diagnosed immediate action was taken to control its spread. In winter hardiness tests 35 varieties of apples and crabapples in the East Station test orchards survived the winter without injury. Small fruits were severely injured. Honeyking was the only raspberry variety not killed to the ground. It was alive to the tip and produced a normal crop. An average crop of apple and crabapples was harvested but no stone fruits set. The fruit buds of the latter were apparently killed, along with the small fruits, during the severe weather of late September, 1951.

VEGETABLE TRIALS

Efforts have been continued to determine the most suitable varieties and strains of vegetables for Alberta. During the past season emphasis was placed on sweet corn, tomatoes and field corn.

Of 47 varieties of sweet corn tested 39 reached maturity. The earliest in order of harvest were: J-6 Cross, Seneca 60, Orchard Baby, Altagold, Golden Midget, Golden Early Market, Miniature, Banting, Amazing Early Alberta, Sun-up, Early Golden Sweet and Marcross C13x16. They reached harvesting stage over a five-day period starting August 25th. Varieties of processing quality, in order of maturity, included: Early Golden Market, Sun-up, Early Golden Sweet, Marcross, Spancross, Golden Rocket, North Star, Carmelcross and Priscilla.

The cold wet weather of June prevented the setting of early tomato blossoms. Tomatoes selected from a cross between Bison and Farthest North again were the first to reach maturity. Progeny of the cross Improved Farthest North by Red Cloud yielded well. Varieties from Great Britain and Denmark were promising and warrant further observations.

Ninety varieties of field corn were grown for maturity and fodder yield information. The first six highest yielding hybrids were: Warwick 210, Warwick 275, Warwick 240, Pride D. I. A., Minihybrid (White) and Top Crop Canada 279. The highest yielding open pollinated varieties were Rustler's White Dent, Pioneer

White Dent, Assiniboine, Gehu Yellow Flint, Falconer and Aita.
Potato rotation trial plots were laid out at the new farm.

FOUNDATION VEGETABLE SEED PRODUCTION

Processing of twenty vegetable varieties towards foundation status was included in the Station program. Sugar Pumpkin was accepted for foundation status. Plants from selfed lines of Evergreen Cabbage have been stored for next year's seed production. Green Bush Marrow was submitted to the verification trials. Breeding and selecting was started towards the development of a White Bush Marrow.

Testing of canning corn varieties for yield and suitability to processing was carried out in co-operation with the Alberta Canning Company Limited.

FROZEN FOOD PROCESSING

Investigations on processing frozen fruits and vegetables were continued. Test included comparisons of recommended home grown varieties with new varieties and commercial fruit.

One hundred and fifty-three vegetable varieties were processed, packaged and frozen for grading by the taste panel in January.

Various wrapping materials were used to determine their value in protecting and preserving frozen foods. These included waxcraft, butcher manilla, three specialized papers, two cellophanes, three polythene products, aluminum foil, glassine and cardboard tubs. Methods of wrapping were also tested. Various meats were used in the wrapping trials. The meat was examined over a six month period to determine weight losses if any, general appearance and presence of odors. The loss in weight varied from zero to 28.3%. Appearance and flavor were consistent with the weight loss. The cheaper and widely used wrapping materials permitted highest moisture losses.

Protective agents to prevent discoloration by oxidation of light colored fruits were investigated.

Appreciation is expressed to members of the Home Economics Branch for the co-operation and supervision of this work.

HOPS

The hop test yard started in 1945 is now seven years old. The results have been encouraging with no winter killing of plants, good crops being harvested and favourable comment received from brewers.

Hops from 12 varieties were harvested in 1952. Samples were submitted for analysis, through the courtesy of the Calgary Brewing and Malting Company Limited. The commentary attached to their report classified Early Cluster, Late Cluster, Nonsuch, and Pride of Kent as having exceptionally high resin and bittering values. The first two varieties are American Hop types while the latter two are English Hops.

GROWTH

Studies started in 1944 of rate and period of growth in Apple Orchard No. 4 were continued. Fire blight limited the late season records and some trees were eliminated. Terminal bud formation was complete by July 22nd, the earliest during the recorded period.

HARDINESS STUDIES

Root materials of *Malus baccata* were sent to Ottawa for sectioning. A wide variation was indicated and further study would be desirable. An attempt was made to propagate these trees by air-layering. Callus developed but rooting was not apparent. All layers were removed and heeled in for further rooting attempts in the spring of 1953.

REPORT OF THE BOARD OF TRUSTEES OF THE
SURPLUS WHEAT BOARD RECEIVED BY THE
GOVERNMENT OF THE PROVINCE OF ALBERTA
FROM 1916 - 1919 CANADIAN WHEAT BOARD

MEMBERS:

Honourable D. A. Ure	Chairman
Richard Ballhorn	Farmer - Wetaskiwin
Arthur Pierson	Vice President & Treasurer of the Independent Grain Co. Calgary.
O. S. Longman	Deputy Minister, Department of Agriculture.
T. W. Whelan (deceased)	Secretary & Accountant, Department of Agriculture.

During the year the receipts were \$3,094.43 all of which was in payment of interest on investments.

Payments for the year amounted to \$2,106.70 and were made for the following:

Scholarships awarded	\$2,075.00
Board expenses	\$ 31.70

A statement showing receipts and expenditures is attached, also a statement of assets and liabilities.

Investments:

There were no changes in the investments made by the Board during the year. The investments as shown on the attached balance sheet at December 31, 1952, consist of:

(a) Province of New Brunswick	3 1/2% Debentures	\$45,000.00
(b) Province of British Columbia	3% Debentures	\$45,000.00
(c) City of Calgary	3 1/2% Debentures	\$ 4,000.00
		<u>\$94,000.00</u>

Meetings

A meeting of the members of the Board was held on June 6th, 1952, at which time the matter of scholarships was reviewed and it was agreed to approve the list of scholarships as was in effect last year which makes available annually scholarships totalling \$2,475.00

General

Since the Board instituted the policy of providing Scholarships, a total of 284 Scholarships valued at \$23,366.56 have been awarded and paid.

The Board have continued the policy of conserving the principal remaining in the Trust Fund. All expenditures made are from income received from investments.

Schedule of Scholarships approved at Meeting of the Board Friday, June 6, 1952.

From Clubs to School of Agriculture at each Club Week:

2 crops, 2 livestock, 2 home - 18 at \$75.00 \$ 1,350.00

From Schools to University at each School,

1 in Agriculture or Home Economics - 3 at \$100.00 300.00

To any young person to attend School of Agriculture	
- 8 at \$75.00	\$ 600.00
To School of Agriculture from Young People's Farm	
Week at University : 1 boy and 1 girl - 2 at \$75.00	150.00
To School of Agriculture from Women's Institute	
Girls' Club Week at Olds - 1 at \$75.00	75.00
	<u>\$ 2,475.00</u>

TREASURY DEPARTMENT

WHEAT BOARD MONIES TRUST FUND

Balance Sheet as at December 31, 1952.

ASSETS

Investments:	Par Value	Book Value
Prov. of New Brunswick 3 1/2% due Apr. 1/67	\$ 45,000.00	\$44,808.10
Prov. of British Columbia 3% due Dec. 15/69	45,000.00	44,607.70
City of Calgary 3 1/2% due July 1/68	4,000.00	3,991.56
	<u>\$ 94,000.00</u>	<u>\$93,407.36</u>
Cash in Bank		4,104.27
Accrued Interest		527.15
		<u>\$98,038.78</u> =====

LIABILITIES

Trust Fund December 31, 1951	\$97,013.40
Add: Surplus for year 1952	1,025.38
	<u>\$98,038.78</u> =====
Trust Fund December 31, 1952	

TREASURY DEPARTMENT

WHEAT BOARD MONIES TRUST FUND

STATEMENT OF RECEIPTS AND PAYMENTS FOR THE YEAR ENDED

December 31, 1952.

Bank Balance December 31, 1951		\$ 3,116.54
Interest on \$45,000 Prov. of N.B. Debs.	\$ 1,575.00	
" " \$45,000 Prov. of B.C. Debs.	1,350.00	
" " \$ 4,000 City of Calgary	140.00	
" " Bank Balances	29.43	3,094.43
		\$ 6,210.97
Deduct : Payments		
University of Alberta Scholarships	\$ 200.00	
Olds School and Farm	675.00	
Vermilion School and Farm	825.00	
Fairview School and Farm	375.00	
Richard Ballhorn - meeting expenses	10.00	
Arthur Pierson - meeting expenses	20.00	
Alberta Government Telephones	1.70	2,106.70
		<u>\$ 4,104.27</u>

TREASURY DEPARTMENT

WHEAT BOARD MONIES TRUST FUND

Accrued Interest as at December 31, 1952

<u>Province of New Brunswick Debentures</u>				
\$45,000	3 1/2%	April 1, 1967	3 months	\$ 393.75
<u>Province of British Columbia Debentures</u>				
\$45,000	3%	Dec. 15, 1969	1/2 month	56.25
<u>City of Calgary Debentures</u>				
\$ 4,000	3 1/2%	July 1, 1968	6 months	70.00
<u>Bank Balance</u>				
\$ 4,104.27				2.62
				\$ 522.62
Add : <u>Accum. of Discount</u>				
				3.31
				.96
				.26

Net Earnings Accrued to Dec. 31, 1952 \$ 527.15

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MAR 27 RETURN

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Annual report of the
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GENERAL SCIENCES

